

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
 FOR THE COUNTY OF YAVAPAI

2011 NOV 23 AM 9:02

SANDRA K HARKHAM, CLERK

BY:

Jacqueline Harkham

STATE OF ARIZONA,

Plaintiff,

vs.

JAMES ARTHUR RAY,

Defendant.

Case No. V1300CR201080049

REPORTER'S TRANSCRIPT OF PROCEEDINGS
 BEFORE THE HONORABLE WARREN R. DARROW

TRIAL DAY FORTY-ONE

MAY 5, 2011

Camp Verde, Arizona

ORIGINAL

REPORTED BY
 MINA G. HUNT
 AZ CR NO. 50619
 CA CSR NO. 8335

1 IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
2 FOR THE COUNTY OF YAVAPAI
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4 STATE OF ARIZONA,)
5 Plaintiff,)
6 vs) Case No. V1300CR201080049
7 JAMES ARTHUR RAY,)
8 Defendant)
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1 Proceedings had before the Honorable
2 WARREN R. DARROW, Judge, taken on Thursday, May 5,
3 2011, at Yavapai County Superior Court, Division
4 Pro Tem B, 2840 North Commonwealth Drive,
5 Camp Verde, Arizona, before Mina G. Hunt, Certified
6 Reporter within and for the State of Arizona.
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1 PROCEEDINGS

2 (Proceedings continued outside presence
3 of jury.)

4 THE COURT: The record will show the presence
5 Mr. Ray, the attorneys; Mr. Kelly, Mr. Li, and
6 Ms. Do. Ms. Polk and Mr. Hughes represent the
7 state.

8 And I was informed that somebody wanted
9 to talk about a legal matter.

10 MR. KELLY: Yes, Judge. Very briefly. And I
11 believe this obviously is on the record from
12 yesterday's testimony. So it's simply to further
13 the record.

14 But what I wanted to emphasize is that we
15 believe there is some improper questions and
16 answers during redirect relating to Mr. Haddow's
17 conclusions which were set forth in an email
18 identified as a preliminary report in this matter.

19 Specifically on redirect there was a
20 question-and-answer period when -- and, again, the
21 record speaks for itself -- when the inculpatory
22 nature of that report was confirmed by the
23 testimony of the detective.

24 We would have moved for a mistrial
25 yesterday afternoon immediately after his testimony

1 based on that colloquy between the state and the
2 detective on redirect. However, in the interest of
3 time, Mr. Page came. We finished that testimony.
4 It was 5:00 o'clock. You had left the bench.

5 I just want the record to reflect the
6 request in that regard and that we did not waive
7 any assertion as to improper testimony in that
8 regard.

9 And I would remind the Court that earlier
10 in the afternoon there was an extensive discussion
11 about my cross-examination and an argument from the
12 State of Arizona that I was not allowed to assert
13 any exculpatory information from that report during
14 my cross-examination of Detective Diskin, which I
15 did not do. And, again, the record speaks for
16 itself.

17 But it's our interpretation, then, that
18 the inculpatory aspects of the report were, in
19 fact, presented to the jury through a question
20 format that was something like did you consider --

21 THE COURT: CO2.

22 MR. KELLY: Yeah. Carbon dioxide and
23 structure. I don't have an exact memory, but I
24 recall the CO2. And the answer was yes, I did.
25 And it was consistent with my conclusion.

1 So I want to make sure that the record is
2 clear. We believe that it's improper. We move for
3 a mistrial. And we're not waiving that given the
4 second witness in the afternoon.

5 THE COURT: Ms. Polk.

6 MS. POLK: Your Honor, the -- when Mr. Kelly
7 cross-examined Detective Diskin, he had stated to
8 Detective Diskin that you never told Ms. Do in the
9 interview that occurred in June of 2010 about
10 carbon dioxide, did you?

11 And Detective Diskin had responded, yes.
12 I did.

13 And then Mr. Kelly had said, well, we can
14 look at a transcript, can't we, and then never went
15 back to it.

16 My question on redirect was picking up on
17 that line, did you tell Ms. Do in the interview
18 about carbon dioxide, and what did you tell her?
19 But it was simply following up on a question by
20 Mr. Kelly in his cross-examination.

21 THE COURT: The motion for mistrial is denied.

22 MR. KELLY: Judge, that's the only issue that
23 I had this morning. Thank you.

24 THE COURT: Ms. Polk, Mr. Hughes, anything?

25 MR. HUGHES: No other issues, Your Honor.

1 THE COURT: Okay. I just want to make sure
2 you both got this note of concern about trial
3 timing from one of the jurors. And that's
4 something to think about.

5 Okay. We'll start soon. Thank you.

6 (Recess.)

7 (Proceedings continued in the presence of
8 jury.)

9 THE COURT: The record will show the presence
10 of the defendant, Mr. Ray; the attorneys, and the
11 jury.

12 And the state may call the next witness.

13 Mr. Hughes.

14 MR. HUGHES: Thank you, Your Honor. The state
15 calls Dr. Mosley.

16 THE COURT: Dr. Mosley, If you'd please step
17 to the front of the courtroom where the bailiff is
18 directing you.

19 Raise your right hand to be sworn by the
20 clerk.

21 ARCHIAUS LICINIUS MOSLEY, JR., M.D.,
22 having been first duly sworn upon his oath to tell
23 the truth, the whole truth, and nothing but the
24 truth, testified as follows:

25 THE COURT: Please be seated here to my right.

1 Dr. Mosley, would you please start by
2 stating and spelling your full name.

3 THE WITNESS: My name is Archiaus Licinius
4 Mosley, Jr., M.D.; Archiaus, A-r-c-h-i-a-u-s;
5 Licinius, L-i-c-i-n-i-u-s; Mosley, M-o-s-l-e-y;
6 Jr., J-r.

7 THE COURT: Thank you.

8 Mr. Hughes.

9 MR. HUGHES: Thank you.

10 DIRECT EXAMINATION

11 BY MR. HUGHES:

12 Q. Doctor, can you tell us what your
13 occupation is.

14 A. I'm a medical examiner.

15 Q. And in what area of the state are you a
16 medical examiner?

17 A. Northern Arizona. I work for Coconino
18 County. That's the county in which Flagstaff is.

19 Q. And how long have you been a medical
20 examiner?

21 A. I've been a medical examiner since July
22 of 1999.

23 Q. And how long have you been in Coconino
24 County?

25 A. July of 2008.

1 Q. And where were you working, then, as a
2 medical examiner prior to July of 2008?

3 A. Well, from July of 1999 through June
4 of 2008, I was employed by the Maricopa County
5 office of the medical examiner in Phoenix.

6 Q. And can you walk us through, if you
7 would, where you obtained your undergraduate and
8 medical degrees.

9 A. I have an undergraduate degree from the
10 University of California at Berkeley in bioresource
11 sciences. That was followed by a medical degree
12 from the University of California at San Diego.

13 That was followed by a five-year residency in
14 anatomic and clinical pathology at Georgetown
15 University Medical Center in Washington, D.C.

16 And that was followed by a one-year
17 fellowship in forensic pathology at the office of
18 the chief medical examiner for the State of
19 Maryland in Baltimore.

20 Q. And do you hold any medical or other
21 professional licenses?

22 A. I have a license to practice medicine in
23 the state of Arizona.

24 Q. And is that license in good standing?

25 A. Yes.

1 Q. Have you ever testified as an expert
2 before?

3 A. Yes.

4 Q. And can you give us just an overview of
5 the courts and the approximate dates that you've
6 testified as an expert.

7 A. I can remember testifying once in
8 Maryland. And it's probably 20 or 30 times in
9 Phoenix or Maricopa County and twice so far in
10 Coconino County.

11 Q. Do you have an idea of how many autopsies
12 you've personally performed?

13 A. Somewhere in the order of three to 4,000.

14 Q. And do you know how many of those you've
15 performed since your fellowship ended?

16 A. Probably somewhere around 2,700 to --
17 well, about 500 fewer than I've performed -- well,
18 as a fellow I did around 400 autopsies. So 3,600
19 perhaps or 3,200.

20 Q. And can you tell us what forensic
21 pathology is?

22 A. Sure. Let me back up. Pathology is the
23 study of disease. A pathologist is a medical
24 doctor who instead of doing a residency in surgery
25 or pediatrics or internal medicine does a

1 fellowship in pathology, which it's -- we've been
2 referred to the doctors' doctor because other
3 doctors will come to the pathologist to establish a
4 diagnosis about a person's particular disease.

5 But forensic pathology is the study of
6 disease as it relates to the law and legal
7 proceedings. It's sort of those sorts of cases
8 that tend to end up in court or the manner of death
9 is nonnatural in particular. So the cases I see,
10 some of them are natural, but they're also
11 accidents, suicides, homicides.

12 Q. How does a forensic pathologist determine
13 a manner and cause of death?

14 A. Well, the manner is pretty much dictated
15 by the circumstances. The manner isn't a
16 scientifically derived determination. It's based
17 on investigation and the history. For example, if
18 someone is in a car accident, it's the scene
19 findings, the crashed vehicle, the road conditions,
20 that establish that as being an accident or -- but
21 the manner is pretty much dictated by the
22 circumstances surrounding the death.

23 Another example might be a gunshot wound
24 to the head. It could be suicide or it could be a
25 homicide. It's the circumstances that tell me

1 which it is.

2 Q. And can you tell us, then, what the
3 difference what -- how you define "manner of death"
4 and "cause of death"?

5 A. Sure. The cause of death is the event or
6 disease that's set, the physiological derangement
7 that resulted in the death; the proximate cause of
8 that thing, that event, that resulted in someone's
9 death.

10 For example, an acute myocardial
11 infarction is a cause of death that resulted in a
12 lack of blood flow to the brain and irreversible
13 brain death. So I don't put cerebral hypoxia as
14 the cause of death because the cause of death in
15 that case would be the heart attack, which resulted
16 in the lack of blood flow and oxygen delivery to
17 the brain.

18 So the cause of death is, basically, what
19 event or disease process resulted in the death,
20 just distinction from the mechanism of death, which
21 are particular physiological derangements that
22 might happen in a sequence like that.

23 An example of a cause of death would be a
24 gunshot wound to the head or multiple injuries or
25 narcotic intoxication, something like that. The

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1 manner of death speaks to the circumstances --
2 homicides suicide, accident, undetermined, natural.

3 Q. Are those, the terms you just used --
4 homicide, suicide, undetermined, accident and
5 natural -- are those the choices that you have as a
6 medical examiner to choose from in determining
7 manner of death?

8 A. Yes. I don't have subcategories or
9 shades of gray when it comes to manner of death. I
10 don't have degrees of homicide. I just have
11 homicide.

12 Q. Do you determine, then, legal
13 responsibility for cause of death?

14 A. No.

15 Q. If, for example, a drunk driver were to
16 hit and kill a child on the street, by all intents
17 and purposes it appeared to be an accidental
18 hitting. In other words, the driver didn't have it
19 out for the little boy. How would you determine
20 that manner of death in a case like that?

21 A. I would rule that an accident, based on
22 tradition mainly and the fact that I believe they
23 accidentally killed that person.

24 Q. Does the medical examiner determine
25 manner and cause of death for every person who's

1 deceased?

2 A. No. Only people who are referred to the
3 medical examiner's office. A person who is well
4 known to their doctor, and they've been following
5 them for some period of time, long enough to know
6 what potentially fatal medical conditions they
7 might have -- that person might sign their death
8 certificate.

9 As long as the cause is a natural disease
10 process, then that case would not be referred to
11 the medical examiner's office for further
12 investigation.

13 Q. And in making a determination, then, into
14 cause of death or manner of death, what records
15 would you, as a medical examiner of Coconino
16 County, have access to and what would you review?

17 A. Medical records. If a person goes to a
18 hospital, I'd like to see their medical records and
19 see what was discovered about them while they were
20 alive. Police reports. If the police investigated
21 the circumstances, I'd like to know what they
22 determined. And those are the sorts of things that
23 I review.

24 Q. How do you go about obtaining records?

25 A. Well, usually I send a fax or request for

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1 medical records to the hospital or the doctor's
2 office and explaining why I need these records.
3 And they generally cooperate with me.

4 Q. If in a rare case someone were not to
5 cooperate, as a medical examiner, do you have the
6 power to sign and issue subpoenas?

7 A. No. Well, if I do, I've never used that
8 power.

9 Q. Have you ever had a problem getting
10 medical records from a hospital when you asked for
11 them?

12 A. On very, very rare occasion.

13 Q. And what staff do you have available to
14 you?

15 A. I have an office manager and three
16 forensic investigators, who are also my autopsy
17 technicians. That's pretty much it.

18 Q. You mentioned that not every case comes
19 to the medical examiner's office for review. Of
20 the cases that do come to your office, do you do an
21 autopsy in every one of those cases?

22 A. No. If the records are -- if I can
23 establish with reasonable medical certainty why
24 they're dead, based on reviewing their medical
25 records, and if I look at the body and I can't see

1 any external evidence of a non-natural cause of
2 death, injuries in particular, then I won't do an
3 autopsy. I reserve the autopsy for when I need to
4 look further to establish the cause of death.

5 Q. What can an autopsy tell a forensic
6 pathologist?

7 A. An autopsy can tell a forensic
8 pathologist what physiological derangements may
9 exist based on anatomical findings such as a scar
10 in the heart muscle or an infarct in the brain,
11 lung disease, tumor. And I'm, basically, looking
12 for anything I can see.

13 If it's normal, I want to know that. If
14 it's abnormal, I want to know that as well.
15 Anything that might result in a physiological
16 derangement that would produce or contribute to a
17 cause of death.

18 Q. And what cannot -- what is -- are there
19 things that an autopsy cannot tell a forensic
20 pathologist?

21 A. Yes. Well, I can think of -- you can't
22 always determine what the circumstances were by
23 the -- from the autopsy. The example that jumps
24 most immediately to mind is an infant who has no
25 marks on it and no evidence of trauma, no evidence

1 of natural disease, but yet they're dead. I can't
2 tell if someone suffocated that baby or if it died
3 from SIDS.

4 Q. Can the absence, then, of findings in an
5 autopsy be relevant in your making a determination
6 of the cause of death?

7 A. I'm sorry, Counsel. Can you repeat the
8 question?

9 Q. If you perform what would, essentially,
10 be a negative autopsy, an autopsy where you didn't
11 find anything abnormal or unusual about the body,
12 can that be relevant to you in making your
13 determination as to cause of death?

14 A. Absolutely.

15 Q. And can you explain how that would be the
16 case.

17 A. Well, a negative autopsy, essentially,
18 excludes an anatomic cause of death based on an
19 abnormal organ or -- for example, in a drug
20 overdose, in a toxicological death, the autopsy may
21 not reveal anything that allows me to pinpoint a
22 cause of death. I rely on chemical tests,
23 toxicological analysis, to establish the diagnosis
24 at that point.

25 Q. And other than an autopsy, what else is

1 important to you, then, in reaching a determination
2 in manner and cause of death?

3 A. In investigative history, reports as to
4 what the circumstances were surrounding this person
5 becoming ill, injured, dead. And that includes
6 their medical history, in particular their medical
7 history.

8 Q. Are circumstances from the scene where a
9 person becomes ill or a person dies relevant in
10 your determination?

11 A. Yes. Absolutely. Well, if a person
12 falls in a swimming pool or something of that
13 nature, that's a pertinent finding. And it would
14 explain why they have fluid in their lungs perhaps.
15 Or if they're in their car seat in the back seat of
16 a sedan in the middle of July -- you know -- that
17 scene is very important to determining the cause of
18 death.

19 Q. In this particular case that brings you
20 here today, Doctor, did you reach a conclusion and
21 perform an investigation into the manner and cause
22 of death of Liz Neuman?

23 A. I did.

24 MR. HUGHES: Your Honor, I believe defense is
25 willing to stipulate to the admission of exhibits

1 886, 362, 363 and 364.

2 MS. DO: That's correct, Your Honor.

3 THE COURT: 886, 362, -63 and -64 are
4 admitted.

5 (Exhibits 362-364 and 886 admitted.)

6 Q. BY MR. HUGHES: Doctor, did you perform
7 an inquiry to determine manner and cause of death
8 of James Shore and Kirby Brown?

9 A. No.

10 Q. And can you tell us how it is, then, that
11 you came to perform a review for the death of Liz
12 Neuman but not for James Shore and Kirby Brown.

13 A. Well, it's -- the medical examiners in
14 Arizona are divided by county. The people you just
15 mentioned died in Yavapai County. Liz Neuman was
16 flown to Flagstaff Medical Center in the next
17 county, where I have jurisdiction.

18 My office has jurisdiction on people who
19 die suddenly and unexpectedly in a manner that's
20 suspicious for not being natural.

21 Q. Why, then, did you decide to conduct a
22 review into Liz Neuman's death?

23 A. To establish the cause and manner of
24 death.

25 Q. Did you prepare an autopsy report that

1 detailed your examination?

2 **A. I did.**

3 MR. HUGHES: Your Honor, may I approach the
4 witness?

5 THE COURT: Yes.

6 **Q. BY MR. HUGHES: Sir, I'm going to show**
7 **you what's been admitted as Exhibit 886 and ask if**
8 **you recognize that document?**

9 **A. I do.**

10 **Q. Can you tell us what Exhibit 886 is.**

11 **A. 886 is a report of investigation that one**
12 **of my investigators prepared. It's standard for**
13 **her to prepare a report of investigation,**
14 **basically, giving me background information on the**
15 **circumstances of death.**

16 **And it lists things like the date and**
17 **time of events, such as the date that the person**
18 **became -- in this tech case, when Liz Neuman became**
19 **injured, when she was pronounced dead, and her age.**
20 **And, basically, it's background information.**

21 **Q. And you said one of your employees**
22 **prepared that?**

23 **A. Yes.**

24 **Q. Do you know which employee it was?**

25 **A. I do.**

1 **Q. Which employee was it?**

2 **A. Her name is Regina Sotelo.**

3 **Q. What does she do for your office?**

4 **A. She's a forensic investigator and autopsy**
5 **assistant.**

6 **Q. And if you can hand me that, I'll be**
7 **asking a few more questions about that in a moment.**
8 **But I want to show you what's been admitted as**
9 **Exhibit 362 and ask if you recognize that document?**

10 **A. I do.**

11 **Q. Can you tell us what Exhibit 362 is.**

12 **A. Exhibit 362 is the autopsy report -- the**
13 **autopsy report I prepared on Liz Neuman.**

14 **Q. And then if I can get that one back.**
15 **I'll probably ask you a couple questions about**
16 **that, or a few more than a couple questions.**

17 **Showing you Exhibit 363, can you tell us**
18 **what that document is.**

19 **A. Exhibit 363 looks like my contemporaneous**
20 **notes, notes I took while -- most likely while**
21 **listening to someone tell me about the case or**
22 **while I was reviewing her medical records. And**
23 **actually it looks like a handwritten draft of the**
24 **report of investigation that I tried to summarize**
25 **in the autopsy report.**

1 **It's distinct from the report of**
2 **investigation that Regina Sotelo put in her report.**
3 **Just judging from how I crossed out sentences and**
4 **rewrote things, it looks like it's a first draft**
5 **and some other pertinent notes about the clinical**
6 **evaluation.**

7 **Q. Then, Doctor, showing you what's marked**
8 **as Exhibit 364, can you tell us what that document**
9 **is.**

10 **A. This is a death certificate from the**
11 **State of Arizona on Lizbeth Marie Neuman, which**
12 **lists the cause of death.**

13 **Q. Did you submit information that was**
14 **included in that death certificate?**

15 **A. I did.**

16 **Q. And I'll ask a couple questions about**
17 **that. If I can get Exhibit 363 back also?**

18 **A. Certainly.**

19 **Q. And what I'd like to do is go through**
20 **these documents so that when the jury reviews them**
21 **later, they will have an understanding of what the**
22 **different components and terms are inside the**
23 **documents.**

24 **So turning, then, to Exhibit 362 -- it**
25 **will take a moment to warm up -- there is what**

1 **appears to be a face sheet with some pathological**
2 **diagnoses. Can you tell us what a pathological**
3 **diagnoses is.**

4 **A. Those are physiological derangements.**
5 **They're the diseases, basically, that I decided to**
6 **list. And -- well, some of it is the relevant**
7 **history, history of multisystem organ failure, to**
8 **give the reader an idea of what happened,**
9 **basically. It's not exclusively pathological**
10 **diagnoses in this particular case.**

11 **Q. I'm sorry. Go ahead.**

12 **A. Some of it is just history.**

13 **Q. And I'll ask you about multisystem organ**
14 **failure in a moment. As far as the term, what**
15 **appears to be numbered paragraph 3, and I'm**
16 **guessing -- anasarca. Can you tell us what that**
17 **is.**

18 **A. Anasarca is generalized body edema, whole**
19 **body fluid retention. She's swollen with fluid.**

20 **Q. And jaundice?**

21 **A. Jaundice is yellowing of the skin as a**
22 **result of liver disease.**

23 **Q. And prior, then, to preparing your report**
24 **of autopsy, is it safe to assume that you actually**
25 **performed an autopsy, then, on Ms. Neuman?**

1 **A. Yes.**
 2 **Q.** And can you explain for us what findings
 3 you made in the autopsy.
 4 **A.** It might help to have a copy of it with
 5 me as I do that.
 6 **Q.** Okay.
 7 **A.** But what I found were things like some
 8 blockage in a coronary artery, fluid overflowing
 9 into different body cavities. These are late
 10 findings. This is after nine days in the hospital
 11 as multisystem organ failure progressed. But --
 12 **Q.** And you mentioned after nine days in the
 13 hospital. When did Ms. Neuman actually die? Do
 14 you know?
 15 **A.** October 17.
 16 **Q.** And do you know which hospital she had
 17 been at prior to her death?
 18 **A.** She died in Flagstaff Medical Center.
 19 **Q.** And how long had she been at Flagstaff
 20 Medical Center?
 21 **A.** Since October 8.
 22 **Q.** Can you, then, walk us through, if you
 23 would, the -- I realize your autopsy report is a
 24 number of pages long. Did you find anything
 25 abnormal or unusual in the autopsy of Ms. Neuman?

1 **A.** Well, jaundice is abnormal. Having whole
 2 body fluid retention is abnormal.
 3 **Q.** Had you obtained Ms. Neuman's medical
 4 records from Flagstaff Medical Center at the point
 5 you issued your report of autopsy?
 6 **A.** I had some. I didn't have the entire
 7 chart. I had mainly the things they had time to
 8 type up by the time I did the autopsy.
 9 **Q.** After doing -- what day did you do the
 10 autopsy on?
 11 **A.** October 19.
 12 **Q.** After doing the autopsy and between that
 13 time and the time you issued your report, did you
 14 obtain any other medical records from Flagstaff
 15 Medical Center?
 16 **A.** Yes.
 17 **Q.** And did you have an opportunity, then, to
 18 review those other medical records prior to the
 19 time that you prepared the report of autopsy?
 20 **A.** Yes.
 21 **Q.** And can you tell us what day, then, you
 22 prepared your report of autopsy.
 23 **A.** Well, I signed the autopsy report on
 24 February 2 of 2010.
 25 **Q.** Had it been prepared sometime before that

1 point?
 2 **A.** Yes. Well, it's open to editing until I
 3 sign it. So thing like organ weights and the fact
 4 that she had 60 percent stenosis in her left
 5 anterior descending coronary artery -- those sorts
 6 of things were there. The numbers, the organ
 7 weights, the amounts of fluids -- those are in
 8 there. But -- you know.
 9 **Q.** Let's go through the report, then,
 10 Doctor. And, again, this is Exhibit 362. We
 11 talked a little bit about what's at the beginning
 12 or the top of page 1 of that report. And at the
 13 bottom of the page, there is a cause of death and a
 14 manner.
 15 Can you explain what led you to believe
 16 the cause of death to be multisystem organ failure
 17 due to hyperthermia due to prolonged sweat lodge
 18 exposure.
 19 **A.** The clinical history in the hospital,
 20 there was evidence of multisystem organ failure.
 21 That was pretty thoroughly documented. And, for
 22 example, things like jaundice. That's evidence of
 23 her liver failing. There is abundant clinical
 24 evidence of multisystem organ failure.
 25 I'm sorry. Did I finish that answer?

1 **Q.** Can you tell us what led you to believe
 2 that this multisystem organ failure that occurred
 3 in the hospital was due to hyperthermia.
 4 **A.** From the scene investigation as -- I
 5 thought it was pretty well established that the
 6 sweat lodge was hot. And I would expect her to
 7 experience hyperthermia or, basically, being too
 8 hot while in the sweat lodge.
 9 **Q.** And can you tell us what "hyperthermia"
 10 means.
 11 **A.** It, basically, means being too hot. It's
 12 not as precisely defined as heat stroke is. But it
 13 means that your body temperature is above what it
 14 should be as a result of a normal process.
 15 So anyone who has a temperature of above,
 16 let's say, 101.5 could be regarded as having
 17 hyperthermia. And there are a multitude of causes
 18 of that. But in this case, I believe it was
 19 environmental exposure to a sweat lodge.
 20 **Q.** Can you tell us, then, or explain the
 21 difference between hyperthermia and the term "heat
 22 stroke"?
 23 **A.** Sure. So heat stroke is -- it has some
 24 very clear clinical parameters. For example, a
 25 rectal temperature above 108 degrees. And there is

1 some other clinical findings that I'm blanking on
2 at the moment.

3 Q. And you said 108 degrees. Are you aware
4 whether some clinicians pick the number 104
5 degrees?

6 A. Yes. Yeah. They do.

7 Q. And is there a reason that you use the
8 term "hyperthermia" as opposed to "heat stroke"?

9 A. Well, yes. In my particular clientele,
10 the people -- the bodies I examine, it's very rare
11 for someone to get a rectal temperature. So
12 knowing that people can test the diagnosis based on
13 the lack of a rectal temperature, I avoid that by
14 just calling it "hyperthermia" and then try to be
15 more descriptive about why they have hyperthermia.

16 Q. You mentioned your clientele. Is it safe
17 to assume those are the patients, if you will, that
18 arrive to you for examination?

19 A. The deceased persons that come to my
20 office.

21 Q. Have you ever performed inquiries into
22 the deaths of people who died from hyperthermia?

23 A. Yes.

24 Q. And do you have an idea approximately how
25 many cases you've seen where people -- decedents

1 have come to you and you've made the determination
2 it was hyperthermia or heat stroke that killed
3 them?

4 A. I would guess about 20 people. In
5 Phoenix in the summer. What I have -- what I had
6 there was people hiking through the desert and
7 passing out, people hiking Camelback mountain,
8 people locking their children in a car while they
9 went to work. In cases like those, I listed the
10 cause of death, essentially, as hyperthermia.

11 Q. You mentioned people hiking as opposed
12 to, say, being locked in a car down in Phoenix. Is
13 there a distinction between hyperthermia or heat
14 stroke that's caused or brought on by exertion and
15 hyperthermia that's brought on by the nonexertion
16 by the situation that a person is in?

17 A. Yes. Well, that is the distinction,
18 exertional versus nonexertional heat stroke. And
19 those are the two major categories of heat stroke,
20 as I understand it.

21 Q. Can you tell us, then, whether the
22 effects on the body are any different based on
23 whether the hyperthermia is brought on through
24 exertion or brought on through exposure through the
25 environment?

1 A. Yes. Well, there are differences in the
2 body if they've exhausted themselves, if they've
3 depleted their energy reserves and done an
4 excessive amount of sweating while exerting
5 themselves, if they're not well hydrated.

6 But yeah. The active exercising does
7 change the findings somewhat in exertional versus
8 nonexertional heat stroke.

9 Q. You mentioned that clinical finding for
10 heat stroke would be a rectal temperature. Can you
11 tell us, as a medical professional, if there is a
12 difference in accuracy or quality of temperatures
13 that are rectal as opposed to, say, what my mom
14 used to do, stick a thermometer under my tongue or
15 under your arm or something like that?

16 A. Yes. Well, there is. And that's why the
17 standard, the gold standard, so to speak, is the
18 rectal temperature. Because the rectal temperature
19 reflects the core body temperature, what the body
20 temperature is at its core, as opposed to on the
21 surface, which you can expect would be cooler
22 because of being exposed to the air and cooling
23 forces.

24 Q. Now, you mentioned that in your
25 experience down in Maricopa County, you saw people

1 who did not have rectal temperatures. Were you
2 ever able to actually get any autopsies on patients
3 who had a rectal temperature at the time that they
4 were exposed to the heat?

5 A. Yes. I have.

6 Q. And can you tell us how rare or how
7 common it is to be able to get that measurement.

8 A. It's maybe 10 percent of the time I might
9 find something like that where the person's rectal
10 temperature is recorded pretty quickly after
11 they're discovered. And I think it often maxes out
12 the thermometer. The reading might be 108 degrees.

13 Q. With the passage of time, after a person
14 has been exposed to heat and then taken away from
15 that heat source, what happens to the body?

16 A. It cools. And that's the idea. Take
17 them away from the heat source so they will cool
18 down to a more physiologically appropriate
19 temperature.

20 Q. If a person has been taken away from a
21 heat source and, say, an hour or more passes, would
22 you find that a temperature, even a rectal
23 temperature, to be dispositive in making a
24 determination of cause of death if it was taken an
25 hour or more after their exposure to the heat?

1 **A. An hour. Yes. I would expect it to be**
2 **substantially lower.**

3 **Q.** I'm going to turn back to the report in a
4 moment. But as far as your experience in dealing
5 with heat related deaths, have you had occasions
6 where the patients or the people who have come to
7 you have been -- you know -- the ones discovered in
8 the desert, for example, were they more or less
9 skeletonized?

10 **A. I'm trying to remember a case like that.**
11 **But I can't remember one where they were**
12 **skeletonized.**

13 **Q.** If you had a case like that, where there
14 really wasn't much left to perform an autopsy on,
15 would that be a case that would be presented
16 nevertheless to a medical examiner to try and
17 determine manner and cause of death?

18 **A. It would be presented. Yes.**

19 **Q.** And how would you go about making that
20 determination, then, if you really only had some
21 skeletonized remains found in a desert wash?

22 **A. You know, I think I would most likely**
23 **rule the manner as both undetermined in a case like**
24 **that where there is no tissue left to look at.**
25 **Because there are things that could occur that I**

1 **could neither prove nor disprove.**

2 **Q.** How many of the cases, then, where you've
3 made a conclusion of hyperthermia or heat stroke
4 have there been a body that's relatively intact for
5 you to examine?

6 **A. I would think most of them probably. If**
7 **I made that diagnosis, I assume I had a relatively**
8 **intact body.**

9 **Q.** And how many cases have you had which
10 involved nonexertional heat stroke, in other
11 words -- or nonexertional hyperthermia that was
12 brought on through environmental conditions as
13 opposed to, say -- you know -- working as a roofer
14 under the hot sun?

15 **A. I would think three or four.**

16 **Q.** And you mentioned a case involving, as a
17 hypothetical, someone getting locked in a car.
18 Have you ever had an actual case where someone was
19 locked in a hot car?

20 **A. Yes.**

21 **Q.** Have you had any cases where people have
22 been locked in or inside of other hot environments
23 like a car or some other hot structure?

24 **A. I had one sauna death where a person**
25 **spent too long in a sauna.**

1 **Q.** And a sauna. Would that involve heat and
2 humidity?

3 **A. Yes.**

4 **Q.** And the case involving the car, did that
5 involve heat and humidity?

6 **A. Mainly heat. I'm not sure what role**
7 **humidity played, if any. Probably it wasn't a**
8 **substantial factor, although the vaporization of**
9 **sweat would contribute to the humidity in a locked**
10 **environment, I would think.**

11 **Q.** Can -- for example, the sauna that you
12 mentioned, can humidity affect a body that's in a
13 very hot environment?

14 **A. Absolutely.**

15 **Q.** Can you explain how that would be.

16 **A. Well, we sweat to cool ourselves. And if**
17 **the air around you is so soaked with water that you**
18 **can't evaporate your sweat into it anymore because**
19 **it's saturated with water, so to speak, then that**
20 **defeats a major cooling mechanism that we have.**

21 **Q.** Can moist air carry heat any differently
22 than dry air?

23 **A. Yes. The moisture will vaporize. I'm**
24 **sorry. Moisture carries heat differently. Well,**
25 **the heat is in the water molecules in the air. And**

1 **dry air it would be evaporated. I'm not sure I --**

2 **Q.** That wasn't a good question on my part.
3 Would a person exposed -- as a hypothetical, if you
4 had a person in an enclosed space. Let's use, for
5 example, that sauna that you mentioned. If they
6 were in an enclosed space and it was the same
7 temperature that would ultimately lead to
8 hyperthermia, would you expect their symptoms and
9 the progression of the disease of hyperthermia to
10 occur at any different rate for the person who was
11 in, say, a dry sauna as opposed to a person who was
12 in a very humid sauna of the same temperature?

13 **A. Yes. Because of the moisture in the air**
14 **and the sauna, I would expect the symptoms of**
15 **hyperthermia to occur more quickly.**

16 **Q.** Now, moving to Ms. Neuman's -- to your
17 analysis of Ms. Neuman. You have explained the
18 first page for us. Can you walk us through, then,
19 what factors you relied on in making your
20 determination as to the manner and cause of death.

21 **A. You just want me to read through this**
22 **or --**

23 **Q.** The jury is going to have the opportunity
24 to read the actual report. My question is are
25 there particular factors of significance that you

1 relied upon in making your determination?

2 **A. Well, yes. That she lost consciousness**
3 **while in -- while inside of the sweat lodge.**
4 **That's significant because she -- you can't protect**
5 **yourself when you're unconscious. You can't do**
6 **things to cool yourself if you're unconscious.**

7 **Q.** Is the loss of consciousness something
8 that you would expect to see in a person suffering
9 from hyperthermia or heat stroke?

10 **A. Yes.**

11 **Q.** And can you tell us why you would expect
12 to see a loss of consciousness.

13 **A. Well, the cardiovascular system is**
14 **overwhelmed at some point where it can't do its job**
15 **of pumping blood the way it should because of the**
16 **stressors involved in being in a hot environment or**
17 **an abnormally hot environment. But it's,**
18 **basically, cardiovascular collapse that would**
19 **result in a loss of consciousness.**

20 **Q.** What other symptoms would you expect to
21 see in a person as they began to suffer from
22 hyperthermia or heat stroke?

23 **A. Well, their skin would dilate -- the**
24 **blood from their skin -- in order to try and**
25 **transfer more heat from their blood through their**

1 **skin to evaporate.**

2 **Q.** What would that look like if my skin was
3 dilating right now?

4 **A. Purple.**

5 **Q.** Okay.

6 **A. You might look kind of purple as those**
7 **little blood vessels engorge. And mental status**
8 **changes where you're confused; you might be**
9 **incoherent; your brain is, basically, not working**
10 **correctly as a result of hyperthermia. So**
11 **confusion and difficulty in perceiving and**
12 **interacting with your environment.**

13 **Q.** What about nausea and vomiting? Is that
14 something you would expect to see?

15 **A. You can see nausea and vomiting in**
16 **hyperthermia. Yes.**

17 **Q.** And can you tell us, then, Doctor -- in
18 this particular case when you have a reported
19 circumstance of death that's in your autopsy
20 report, can you tell us where that information was
21 derived from.

22 **A. Partly from my investigator's report.**
23 **And I'd have to look at that again to see if that's**
24 **entirely true. But usually what I do is I**
25 **summarize what my investigator wrote in her report.**

1 **Q.** By the "investigator's report," are you
2 referring to this document, which is Exhibit 886?

3 **A. Yes.**

4 **Q.** Can you just let us know if after
5 reviewing Exhibit 886, if that helps you to make a
6 determination of where the information came from
7 that's portrayed on page 2 of Exhibit 362?

8 **A. Yes. Well, I think a lot of this is**
9 **gleaned from the medical records, what was reported**
10 **to the clinicians at the hospital.**

11 **Q.** And what was the date of your medical
12 investigator's report?

13 **A. I think she completed this on the 19th of**
14 **October 2009.**

15 **Q.** Do your investigators have to work pretty
16 quickly in your business?

17 **A. Yes. They stay pretty busy. They have**
18 **to review records of people who don't meet criteria**
19 **for being medical examiner's cases. So they do**
20 **some gatekeeping, so to speak, where all the deaths**
21 **are reported to them. But they have to decide is**
22 **there something about the history that would give**
23 **the medical examiner's office jurisdiction on this**
24 **case -- something non-natural in etiology.**

25 **They stay busy with that, and they stay**

1 **busy -- they actually have to drive to the scenes**
2 **to retrieve bodies all over Coconino County, which**
3 **I understand is the second largest county in the**
4 **country.**

5 **Q.** I heard somewhere it's about the size of
6 New Hampshire or one of those states on the east
7 coast.

8 **A. So my investigators spend a lot of time**
9 **driving. From the Grand Canyon to Sedona wouldn't**
10 **be unusual for in one day for an investigator.**

11 **Q.** Can you tell us, then, what findings you
12 made in your autopsy that led you to your diagnosis
13 of multisystem organ failure due to hyperthermia.

14 **A. Well, in the autopsy the findings are the**
15 **jaundice, the fluid overload, the excess fluid in**
16 **her body cavities, her lung cavity. The amount of**
17 **fluid in her lungs and in the cavity in which her**
18 **lungs reside is consistent with respiratory**
19 **failure. So that's lung failure.**

20 **The jaundice and -- also speaks to liver**
21 **failure. As far as autopsy findings, those are the**
22 **main findings from the autopsy that are consistent**
23 **with multisystem organ failure.**

24 **Q.** Is multisystem organ failure a --
25 something that always occurs when a person suffers

1 from hyperthermia?

2 **A. No. No.**

3 **Q.** Can you tell us how it is that a person
4 can sustain multisystem organ failure from
5 hyperthermia.

6 **A. It's not reversing the hyperthermia in**
7 **time where there is -- where organs actually die or**
8 **are in the process of dying. And by that I mean**
9 **they're irreversibly damaged. But you can sustain**
10 **hyperthermia and be rescued before permanent,**
11 **irreversible damage occurs.**

12 **So in this case there is ongoing damage**
13 **to her organs that progressed and couldn't be**
14 **stopped. But not everyone -- certainly not**
15 **everyone who gets hyperthermic gets irreversible**
16 **tissue damage, organ damage.**

17 **Q.** You mentioned earlier that you might
18 expect to see a mental status change in a person
19 who is suffering from hyperthermia. Is there a
20 point at which the body has a loss of consciousness
21 which can effect whether that person is able to
22 continue breathing or not?

23 **A. Yes.**

24 **Q.** Can you explain what that point would be.

25 **A. The point -- let me make sure I**

1 **understand the question. The point at which loss**
2 **of consciousness results in the inability to**
3 **breathe?**

4 **Q.** Is there a point where there is a mental
5 status change or a loss-of-consciousness or a
6 level-of-consciousness change that can affect a
7 person's ability to breathe or control their
8 airway?

9 **A. A lot of that is automatic -- the**
10 **breathing drive. You don't need to be conscious to**
11 **breath, thankfully. We could all stand to sleep**
12 **sometimes. It's really a brain damage that occurs.**

13 **Q.** Let me ask you this: Would it be
14 something that you would expect or not expect to
15 see in a person suffering from hyperthermia -- is
16 it possible they might stop breathing?

17 **A. Yes.**

18 **Q.** And can you tell us what the reason why
19 you would expect to see a person stop breathing if
20 they were suffering from hyperthermia.

21 **A. Okay. So in hyperthermia all by itself,**
22 **it's -- the cardiovascular collapses, so the heart**
23 **stops working. And if their heart stops working,**
24 **they can't send blood to their lungs and to their**
25 **brain. And without that you can't drive your**

1 **diaphragm to move up and down and help you breathe.**

2 **Q.** How quickly after exposure to a heat
3 source could a person begin to reach the point
4 where they are suffering from hyperthermia?

5 **A. I'm not sure what the critical levels**
6 **are, but it's a combination of how hot it is and**
7 **how long it's sustained. So there is a total load**
8 **of heat exposure. It's -- so the answer to that**
9 **question kind of varies with how hot is it and how**
10 **long is that.**

11 **Say, a lower level of heat for a longer**
12 **period of time or higher level of heat for a**
13 **shorter period of time would result in the same**
14 **defect. It's sort of a time-temperature product**
15 **that the body is enduring.**

16 **Q.** Do you believe, Doctor, it's possible for
17 a person who is in a very hot environment for over
18 an hour -- would you find it surprising or could
19 you expect to find a person beginning to suffer
20 from hyperthermia?

21 **A. Yes.**

22 **Q.** In this particular case involving
23 Ms. Neuman, do you have any idea or recollection at
24 this point of how long Ms. Neuman was outside the
25 sweat lodge before the medical rescuers came from

1 Guardian Air?

2 **A. I'm not sure. I'm not sure. I think she**
3 **came out at around 5:30. But I'm not sure when the**
4 **first medic attended to her.**

5 **Q.** And as far as the 5:30 figure, do you
6 know where that time came from?

7 **A. In reviewing the witness statements from**
8 **the sweat lodge, that seemed to be about when**
9 **people thought that they exited the sweat lodge.**

10 **Q.** And I'm going to show you what's been
11 admitted as Exhibit 369, which is Ms. Neuman's
12 Guardian Air company records. Was that one of the
13 documents that you reviewed in this case from -- at
14 any point?

15 **A. I do believe I reviewed this early on in**
16 **the case.**

17 **Q.** Does that indicate at what time they were
18 at the side of the patient?

19 **A. 1817 hours or 6:17. So about 45 minutes**
20 **after getting out or so.**

21 **Q.** As far as a person, if they have reached
22 a point where they've stopped breathing and their
23 heart is stopped, is that it for a person, or is it
24 possible to restart the heart at some point?

25 **A. It's definitely possible to restart -- to**

1 **resuscitate a person whose heart is stopped.**

2 **Q.** And does time between when the heart
3 stops and when medical care is provided -- does
4 that influence the probability or likelihood that a
5 heart will be restarted?

6 **A. Absolutely.**

7 **Q.** Can you explain that.

8 **A. Well, after some amount of time without**
9 **blood flow, without oxygen, the cells will**
10 **irreversibly die. The brain -- four, five minutes**
11 **without oxygen, there is irreversible brain damage.**

12 **As far as starting the heart, it can be**
13 **resuscitated. But I'm not sure how long that takes**
14 **for the heart to be without perfusion before it**
15 **can't be restarted again.**

16 **Q.** And you said you don't know what point.
17 Is it possible once you reach that point that the
18 heart can't be restarted -- if at that point CPR is
19 begun, would that make any difference?

20 **A. Yes. Yes. It's a matter of getting**
21 **oxygen, blood flow, to the heart itself. And CPR**
22 **does that. It moves the blood around so that --**
23 **well, the heart in particular, the muscles, the**
24 **cells, get fed, get perfused with oxygen and blood.**

25 **Q.** We heard some testimony a few weeks ago

1 now from other witnesses about something called a
2 "shockable rhythm." Can you explain what a
3 shockable rhythm is.

4 **A. That's not a term I would use. But what**
5 **I imagine they're talking about is if they get any**
6 **rhythm -- if they get a rhythm that's been known to**
7 **be convertible or it can be changed into a normal**
8 **sinus rhythm, a normal heart rhythm. So that you**
9 **might see a rhythm that is abnormal, and you can**
10 **shock it into normality by defibrillating it. I**
11 **assume that's what they're referring to.**

12 **Q.** Again, by "rhythm" are you referring to
13 electrical activity in the heart?

14 **A. Yes.**

15 **Q.** Is there a point at which a person may
16 have electrical activity in the heart that could be
17 shocked into a normal rhythm -- is there a point
18 you kind of go past the point of no return and you
19 can no longer shock that heart back?

20 **A. Yes.**

21 **Q.** Do you know how quickly that can develop?

22 **A. I'm not sure.**

23 **Q.** Can it take hours? Can it take minutes?

24 **A. I would imagine it's on the order of**
25 **minutes maybe.**

1 **Q.** And, Doctor, in conducting an autopsy
2 when you have a relatively intact body, is there a
3 particular finding that sort of is the "aha"
4 finding? You know -- they say the aha moment --
5 you know -- where if you find this, you know beyond
6 any reasonable doubt that it was hyperthermia that
7 caused the death?

8 **A. In the case of hyperthermia, there are no**
9 **findings that are specific for hyperthermia. There**
10 **is no -- I can't point to something anatomically**
11 **and say, aha. Hyperthermia. You can't do that.**
12 **But diagnosis is dependent on the investigation.**

13 **Q.** Can you explain what you mean by it's
14 dependent on the investigation.

15 **A. So if that body arrives at my front door**
16 **without any history, and I do an autopsy, I'm not**
17 **going to be able to tell you why that person died.**
18 **But the investigation into what led that person --**
19 **the sequence of events that led up to that person**
20 **being dead is what allows me to have an opinion**
21 **about why that person is dead. It's not the**
22 **autopsy but the circumstances surrounding the death**
23 **that make the diagnosis.**

24 **Q.** Now, Ms. Neuman's case, because she was
25 in the hospital for those nine days, if, let's say,

1 her body was anonymously delivered to your door,
2 would you at least be able to diagnosis the
3 multisystem organ failure?

4 **A. Yes.**

5 **Q.** Is the multisystem organ failure
6 something that you, then, would expect to find in a
7 person who has suffered from hyperthermia?

8 **A. As a late stage, yes, a terminal stage of**
9 **the sequence of events starting with hyperthermia.**
10 **But a lot of conditions have a final commonality in**
11 **multisystem organ failure.**

12 **Q.** So can you tell us in general what
13 multisystem organ failure you found in Ms. Neuman.

14 **A. Well, her liver failure is evident. The**
15 **fact that there is so much fluid in her lungs and**
16 **outside of her lungs speaks to respiratory failure.**
17 **Those are the most obvious ones. So those -- yeah.**
18 **Based on the autopsy, that's really the evidence of**
19 **multisystem organ failure that I have.**

20 **Q.** We heard some testimony about from a
21 doctor a few weeks ago or a month ago regarding
22 something called "DIC."

23 Are you familiar with that term?

24 **A. Yes.**

25 **Q.** Can you tell us what DIC is, and did it

1 play a role with Ms. Neuman?

2 **A. DIC, disseminated intravascular**
3 **coagulopathy. Basically, she is forming clots in a**
4 **pathological way and lysing those clots. The**
5 **clotting proteins in her blood are depleted. And**
6 **she's a setup for bleeding spontaneously because**
7 **she doesn't have -- the clotting factors have been**
8 **consumed and are -- I'm not sure what more to say**
9 **about DIC.**

10 **Q.** Well, is DIC something that you would
11 expect to see in every patient who suffers from
12 hyperthermia?

13 **A. No.**

14 **Q.** Is it something that you would be
15 surprised to see in a patient suffering from
16 hyperthermia?

17 **A. No.**

18 **Q.** Can you tell us -- we've heard from
19 another doctor about nonspecific diagnosis or --
20 can you tell us what that is and whether DIC is
21 something you would consider to be specific to
22 hyperthermia or nonspecific to hyperthermia.

23 **A. It's nonspecific to hyperthermia because**
24 **a lot of other conditions have DIC as a**
25 **consequence. It's -- for example, if someone is --**

1 **if their blood is infected with a bacteria per se,**
2 **you might -- you would -- eventually you would see**
3 **DIC develop.**

4 **But hyperthermia and sepsis, or blood**
5 **infection, are two very distinct entities that**
6 **might give you the same pathological consequence of**
7 **an intravascular clotting, bleeding, disorder.**

8 THE COURT: Excuse me. We need to take a
9 recess for a few minutes.

10 Ladies and gentlemen, please reassemble
11 at 10 till, about 15 minutes. And remember the
12 admonition.

13 And, Dr. Mosley, the rule of exclusion
14 has been invoked in this case.

15 (Recess.)

16 THE COURT: The record will show the presence
17 Mr. Ray, the attorney, the jury. Dr. Mosley has
18 returned to the witness stand.

19 Mr. Hughes.

20 MR. HUGHES: Thank you, Your Honor.

21 **Q.** Doctor, turning your attention to
22 Exhibit 363, which are your notes, can you recall
23 approximately when these notes would have been
24 made?

25 **A. That's probably the day of the autopsy.**

1 **Q.** I noted in the notes it indicated there
2 is a strikethrough of some language. It said, she
3 had eaten little for the preceding two days as
4 the -- and then it was stricken through. Can you
5 tell us why it is you struck that through?

6 **A. You know, I didn't want to overwrite the**
7 **summary of reported circumstances of death. These**
8 **are notes, well, that I thought would never see the**
9 **light of day, much less be presented in court. I**
10 **guess I was just trying to tighten up what I had to**
11 **say in that section of the report called "reported**
12 **circumstances of death."**

13 **Q.** Did you know at the time whether that was
14 even accurate, if Ms. Neuman had eaten little for
15 the preceding two days?

16 **A. I do think that's accurate from what I've**
17 **been told or what I've read.**

18 **Q.** If you were to learn that Ms. Neuman was
19 not one of the participants who did have little to
20 eat, would that change your opinion in the case?

21 **A. No.**

22 **Q.** Do you know -- is it possible you struck
23 that out because at some point you were informed
24 that was incorrect information?

25 MS. DO: Objection, Your Honor. Leading.

1 THE COURT: Overruled.

2 You may answer that if you can,
3 Dr. Mosley.

4 THE WITNESS: I don't think so. I don't think
5 that's why I left it out.

6 **Q.** BY MR. HUGHES: You indicated that this
7 was some sort of a draft for a document you were to
8 prepare later. Can you tell us what document it is
9 you were preparing.

10 **A. My autopsy report.**

11 **Q.** On the date, then, that -- can you tell
12 us what day you actually performed the autopsy.

13 **A. October 19th.**

14 **Q.** Did you at that time have a preliminary
15 opinion as to manner and cause of death?

16 **A. Yes. At that point all indicators were**
17 **that this was a heat-related death.**

18 **Q.** Was that opinion based at all -- and I'm
19 going to show you Exhibit 886, which is your
20 investigator's report. Was that opinion based in
21 any part on the report by your investigator?

22 **A. Yes. Although, I'm not sure what her**
23 **sources are here. And in retrospect, I'm not sure**
24 **where she gets, for example, dehydration, as there**
25 **is a sentence under background. Several others**

1 from the sweat lodge became ill with heat
2 exhaustion and dehydration. Well, I'm not sure
3 where the part about dehydration in particular came
4 from.

5 Q. The part where it says, first she became
6 ill from heat exhaustion and dehydration?

7 A. Right.

8 Q. Would the fact one way or the other that
9 Ms. Neuman did have dehydration or did not have
10 dehydration -- would that influence your
11 determination of manner and cause of death?

12 A. To some extent. I mean, typically when
13 you often do see evidence of dehydration in someone
14 suffering from heat stroke or hyperthermia.

15 Q. You said you often see. Is that
16 something that is a requisite finding for a
17 determination of cause of death?

18 A. No. Because heat all by itself is
19 directly toxic to tissue without mechanistically
20 acting through dehydration. So often the heat
21 causes dehydration. And the consequences of the
22 dehydration are damage to your organs.

23 But your organs can be damaged directly
24 by the heat and not necessarily by acting
25 mechanistically through dehydration.

1 Q. You mentioned as an example earlier a
2 case involving -- that you had seen involving
3 someone locked in a car?

4 A. Uh-huh.

5 Q. Was that an adult or a child?

6 A. It was a child.

7 Q. If -- as a hypothetical, if a person were
8 to hydrate well, to drink well, and they get locked
9 in a car in the hot sun in Phoenix for an hour or
10 two, would you expect to see dehydration?

11 A. Not necessarily. So things like
12 dehydration, what I look for -- and this isn't
13 relevant to Ms. Neuman really because she's very
14 different from what the typical presentation for
15 hyperthermia is.

16 I look for things like does their skin
17 tent when I press it. Is there enough fluid in the
18 tissues that it will stay up when I pinch it. But
19 chemically speaking, you can look at electrolytes
20 in the eyeball fluid and see if they're skewed in a
21 pattern consistent with dehydration -- too much
22 solute, electrolytes, sodium chloride, and not
23 enough water. So relatively there is a shift in
24 the relative concentrations of those electrolytes
25 in the eyeball fluid.

1 I'm sorry. I lost track of the question.

2 Q. So if that little boy -- his mom had him
3 drink a lot of liquid and then left him in the hot
4 car down in Phoenix locked in this hot car, would
5 you expect -- since he was going in with lots of
6 fluid, say, in the belly, in his body, would you
7 expect that he would be dehydrated at the time that
8 you found the body at the point of death?

9 A. Not necessarily. He might be -- there
10 may be no evidence of dehydration if he properly
11 was thoroughly hydrated before, or even
12 overhydrated.

13 Q. And you mentioned that Ms. Neuman was
14 sort of a different case. Can you explain what you
15 meant by that.

16 A. Well, typically most medical examiners'
17 cases that involve hyperthermia, the person is dead
18 at the scene. She died nine days later at the
19 hospital. There is a lot of thing that happened
20 that I don't normally see in a hyperthermia case.

21 Q. What are the sort of the things that
22 happened with Ms. Neuman that you wouldn't
23 necessarily see in a case where a person is found
24 dead at the scene?

25 A. Well, she's got fluid in her tissues all

1 over her body. She's retaining a large amount of
2 water. But that's the anasarca I referred to
3 earlier. Jaundice. That's not what you'll find.
4 It a very late finding and not something you will
5 see in someone who dies of hyperthermia at the
6 scene.

7 Q. Now, if you performed your autopsy on
8 October 19, can you tell us why it is that the
9 report was finally signed by you -- and showing
10 Exhibit 362. Why was the report published, so to
11 speak, on February 2?

12 A. I wanted to confer with my colleagues,
13 Dr. Lyon in particular, to see what he was thinking
14 about this case. And I just wanted to mull it over
15 for a while and consider what evidence I had, think
16 about it, ruminate on it, and make sure I had --
17 well, to see what I had as far as evidence to base
18 the cause of death.

19 Q. Did you confer with or talk to a fellow
20 by the name of Dr. Czarnecki?

21 A. Dr. Czarnecki is my colleague in Coconino
22 County. There are two medical examiners. I did
23 but not in a very substantive way. I mean,
24 conversationally. Basically, shared with him the
25 facts of the case.

1 Q. Do you know whether Dr. Czarnecki
2 actually went to the scene on the night of
3 October 8 or the morning of October 9?

4 A. Yes. He did. And so did a few of my
5 other -- so did the investigators from my office.

6 Q. Did you have that information available
7 to you in making your determination?

8 A. Yes, I did.

9 Q. You mentioned you wanted a chance to
10 confer in particular with Dr. Lyon. Can you tell
11 us who Dr. Lyon is.

12 A. Dr. Lyon is the pathologist, the forensic
13 pathologist, who performed the autopsies on the
14 other two people who died in this case.

15 Q. And why is it you wanted to confer with
16 him?

17 A. I've known him for some time. I know him
18 to be a thoughtful, logical person. And like
19 having a trusted friend who you can -- you know
20 well enough to value how they think and what they
21 think, what their logic is.

22 In this business I spend a lot of time
23 arguing with myself about what's going on. But
24 it's really nice to have someone else to argue with
25 as far as is it this or is it that. It's that kind

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1 of internal dialogue where I'm going through the
2 logic, analyzing the findings.

3 And after I'm done in my -- well,
4 metaphorically speaking, bouncing the thoughts in
5 my own internal pinball machine, to bounce the
6 thoughts in someone else's internal pinball machine
7 and see if I come to a different opinion.

8 Q. Lawyers like to do that too.

9 Did you then get an opportunity to
10 discuss the case with Dr. Lyon?

11 A. Yes.

12 Q. And do you recall about when that was?

13 A. We had a conference, a teleconference, a
14 while back. I'm not sure when that was. He voiced
15 his opinion.

16 Q. Was that late in October 2009?

17 A. Maybe.

18 Q. Do you have any recollection?

19 A. I have a recollection of being on the
20 phone and the conversation and my dog wanting to
21 chime in. I don't remember the date.

22 Q. Did you actually -- strike that.

23 You said you were on the phone. Do you
24 know where the meeting took place?

25 A. I assumed it was the Yavapai County

1 Attorney's Office.

2 Q. And during that -- coming into that
3 meeting, what was your opinion as to the cause of
4 death for Ms. Neuman?

5 A. I thought it was hyperthermia.

6 Q. And at the conclusion of the meeting,
7 what was your opinion as to cause of death?

8 A. It was, essentially, unchanged.

9 Hyperthermia. You know, the other investigative
10 details that might have come up about the scene, I
11 didn't -- there was no other cause of death or
12 mechanism that was documented as a point of fact,
13 like some other exposure that might have
14 contributed that was not discussed in that meeting.

15 Q. And prior to the meeting -- did you have
16 a conversation with Dr. Lyon in that meeting?

17 A. You know, I guess -- not a direct
18 conversation. I spoke and he spoke. But when you
19 say "conversation," it sounds like just the two of
20 us are speaking. I might have, but I --

21 Q. Did you express your opinion about
22 whether cause of death should be properly labeled
23 "hyperthermia" as opposed to "heat stroke"?

24 A. Right. And he dug in his heels about
25 calling it "heat stroke," and I dug in my heels

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1 about calling it "hyperthermia." And we agreed to
2 disagree about the exact phrasing.

3 Q. Do you recall why it is you didn't -- at
4 that point did not want to call it "heat stroke" as
5 opposed to "hyperthermia"?

6 A. Right. For reasons I mentioned earlier.
7 Clinicians have very specific criteria for the
8 diagnosis of heat stroke. We aren't privy to those
9 criteria. We can't get a rectal temperature. We
10 can't evaluate mental status on a corpse.

11 So because that wording "heat stroke" is
12 so common for clinicians, I avoided by using
13 another term and choosing a more descriptive way of
14 assigning the cause of death, in this case
15 hyperthermia due to prolonged -- hyperthermia due
16 to prolonged sweat lodge exposure.

17 Q. And was that the position you were
18 advocating going into the meeting?

19 A. Yes. But -- you know -- I have to keep
20 an open mind always. And if there is another piece
21 of the puzzle that I need to consider, well, then I
22 need to consider it.

23 Q. Going into the meeting, did you have an
24 opinion as to the manner of death?

25 A. I did.

1 **Q.** And what was your opinion going into the
2 meeting? And then can you tell us why it is that
3 that opinion changed.

4 **A.** Well, as I mentioned earlier, or as we
5 discussed earlier, I don't have a whole lot of
6 boxes to assign manner to. I have homicide,
7 suicide, accident, undetermined, natural. I don't
8 have first degree homicide, second degree homicide.

9 And for a forensic pathologist, the
10 working definition for "homicide" is death at the
11 hands of another, a seemingly wide open kind of
12 working definition.

13 So in my opinion, going into the meeting,
14 I thought that maybe this should be classified as a
15 homicide because her death occurred, in my opinion,
16 at that time at the hands of another. It wasn't
17 her own hands.

18 But after conferring with my colleague,
19 Dr. Lyon, he pointed out to me that this death is
20 more consistent with other deaths that we have as a
21 group of professionals generally called "accident."
22 And so I decided after further consideration to
23 rule it as an accident.

24 **Q.** And I asked you earlier about a
25 hypothetical about a drunk driver hitting a

1 pedestrian. Is it your belief, then, that the term
2 of homicide is reserved when there is an
3 intentional killing?

4 **A.** That's generally true. And that scenario
5 you described with the drunk driver killing
6 someone -- that would be traditionally ruled as an
7 accident. Although you can make an argument that
8 the person died at the hands of another.

9 **Q.** During the course of your investigation
10 up to the time you issued the autopsy report on
11 February 2nd, did you have any toxicology --

12 **A.** I'm sorry. Can you repeat the question.

13 **Q.** Up to the point where you issued your
14 report on February 2nd, had you had any testing of
15 blood or body samples, any sort of toxicology
16 testing?

17 **A.** I did not test Liz Neuman's body tissues,
18 blood, at the time of the autopsy.

19 **Q.** At some point in time after the autopsy,
20 in fact, after the trial began, were you contacted
21 and asked to do some testing for organophosphates?

22 **A.** I was.

23 **Q.** Was that the first time you had heard the
24 term "organophosphates"?

25 **A.** No. No. I remember hearing it in

1 **medical school.**

2 **Q.** Well, that was a bad question. Was that
3 the first time you heard about it with respect to
4 Ms. Neuman?

5 **A.** Oh. Yes.

6 **Q.** And you mentioned you heard about it in
7 medical school. Have you ever in your practice,
8 both as a medical student or resident or in your
9 fellowship or in your professional career since
10 then -- have you ever actually seen a patient who
11 has died from organophosphates?

12 **A.** No.

13 **Q.** And when you were contacted, then, after
14 the trial had begun in 2011, did you have an
15 opinion as to whether the testing for
16 organophosphates would yield much information at
17 that point in time?

18 **A.** Well, let me say I knew it would yield
19 information. But I didn't expect it could possibly
20 be positive. And I thought that to venture
21 interpreting that test as being indicative of what
22 her state was on the day she became ill is -- it
23 would be folly to try that.

24 **Q.** And why is that?

25 **A.** Well, there is so much of a delay in

1 getting the samples. She had other products, blood
2 products, transfused into her. And my
3 understanding is that organophosphates don't last
4 that long in a specimen, particularly if it's
5 frozen, particularly as it's frozen, as her blood
6 samples from the autopsy were frozen.

7 **Q.** Is it correct, then, that you took some
8 blood samples when you performed the autopsy on
9 October 19?

10 **A.** I did.

11 **Q.** And based on your review of the medical
12 records, do you know whether or not, for want of a
13 better word, the blood in her body on October 19th
14 would have been the same blood that was in her body
15 when she presented to the emergency department back
16 on October 8?

17 **A.** I'd expect it to be substantially
18 different.

19 **Q.** Can you explain that answer.

20 **A.** Well, there is so much that's going on in
21 her blood chemistry over the nine days in between
22 presenting to the hospital and dying. But the
23 whole -- how the clinicians dealt with her DIC.
24 They gave her clotting factors and fluid. And her
25 body is still metabolizing. The chemistry of her

1 blood is changing, and they're giving her things to
2 replace things lost.

3 I guess I expected that her blood at the
4 time of her death would be vastly different
5 chemically from the way it was when she presented
6 to the hospital.

7 Q. Do you know whether blood was taken from
8 her at the time she was taken to the hospital?

9 A. I believe it was.

10 Q. And do you know, based on working in
11 Coconino County, how long Flagstaff Medical Center
12 retains blood that's taken?

13 A. They'll keep it for seven days.

14 Q. When Ms. Neuman, then, came to your
15 department, was her blood at admission, then, even
16 available to you at that point?

17 A. No.

18 Q. Now, if the sample had been positive that
19 you had tested earlier this year for
20 organophosphates, would that result be significant?

21 A. Yes.

22 Q. And how would that be significant?

23 A. Well, the symptoms -- the
24 organophosphates -- and I don't know if you have
25 had a physiology lecture lately. But what the

1 organophosphate does is it blocks an enzyme called
2 "acetylcholinesterase." Should I continue with
3 this?

4 Q. I think we're going to have a physiology
5 lecture from you in just a moment on that point.
6 But the question was, if the blood that you drew
7 from Ms. Neuman at the time of the autopsy did test
8 positive for organophosphates, what information
9 would that provide to you and to the parties in
10 this case?

11 A. Well, it would be -- it would explain
12 some of the findings that Ms. Neuman and a few
13 other participants exhibited that are inconsistent
14 or atypical for heat stroke or hyperthermia.

15 Q. Now -- I think we're going to start
16 delving into the physiology about at this point.
17 When you reviewed Ms. Neuman's medical records, do
18 you recall whether there was some debate in these
19 records from her doctors as to whether she was
20 suffering from a cholinergic or an anticholinergic
21 syndrome?

22 A. Yeah. There was. The wording gets a
23 little sticky here because it's a cholinergic
24 syndrome, meaning too much acetylcholine, or an
25 anticholinesterase syndrome. So it's -- if the

1 enzyme that deactivates the acetylcholine is
2 blocked, what you get is excess acetylcholine and
3 the symptoms of having too much acetylcholine at
4 the juncture of two nerve endings that -- they
5 communicate with chemical signals.

6 Q. At the time, then, you prepared your
7 autopsy report, had you reviewed that debate, if
8 you will, between the doctors, Ms. Neuman's
9 doctors?

10 A. Well, I hadn't looked at it. But I
11 didn't draw any conclusions from it because there
12 is nothing in evidence that would suggest a source.
13 I was unaware of anything that would account for
14 the symptoms that they described at that time.

15 Q. If there was nothing at the scene, no
16 toxin at the scene that would cause a cholinergic
17 or anticholinergic syndrome, what would your
18 opinion be about the manner and cause of death for
19 Ms. Neuman?

20 A. Well, I would sign it as I did, with
21 hyperthermia being the cause of death. I rely on
22 what I can prove. I can prove -- well, I have
23 reasonable medical certainty that the sweat lodge
24 was hot. I don't have any indication to believe
25 that there was organophosphates at the scene that

1 would have produced the symptoms that the
2 clinicians observed.

3 Q. And, Doctor, at some point after the
4 trial began, were you asked, then, to go back
5 through Ms. Neuman's records and see if you could
6 make a determination to rule in or rule out, so to
7 speak, based on the medical records whether it
8 appeared that the symptoms were similar or
9 dissimilar to organophosphate poisoning?

10 A. I did. And the symptoms are similar to
11 organophosphate poisoning in a few of the
12 participants.

13 Q. And were you provided with medical
14 records, then, of the other people who went to
15 Verde Valley Medical Center and Flagstaff Medical
16 Center?

17 A. I was.

18 Q. Have you been able to review all those
19 records?

20 A. No.

21 Q. Have you reviewed some of the records?

22 A. I have.

23 Q. And can you tell us what records you've
24 reviewed.

25 A. My main focus was on Liz Neuman, the

1 **person whose death certificate I signed. And I am**
 2 **blanking on the names. There are a few other**
 3 **people -- two other people whose records I**
 4 **reviewed.**

5 **Q.** Did you provide an interview earlier, I
 6 guess, now in April of this year?

7 **A. Yes.**

8 **Q.** And at that interview did Ms. Do ask you
 9 to look in particular at the medical records of
 10 certain participants?

11 **A. Yes.**

12 **Q.** And were those the other records, then,
 13 that you looked at?

14 **A. Not all of them.**

15 **Q.** Do you recall at all which of the records
 16 are that you looked at?

17 **A. I don't want to risk getting the names**
 18 **wrong, so I can't say.**

19 **Q.** Okay. We'll get back to that point in a
 20 minute or two. Can you tell us then -- if you need
 21 to, you can use the easel to the side of you.

22 First of all, can you tell us what -- do
 23 particular types of poisons have particular
 24 symptoms that are common for those types of
 25 poisons?

1 **A. Yes.**

2 **Q.** And is there a name for the symptoms that
 3 are common to particular types of poisons?

4 **A. I'm not --**

5 **Q.** Can you tell us what a syndrome is.

6 **A. So a syndrome is the signs and symptoms**
 7 **that are produced given a particular toxin.**

8 **Q.** And do you know what the typical signs
 9 and symptoms are for a person who is suffering from
 10 organophosphates?

11 **A. Yes. Well, the mnemonic -- there are a**
 12 **few of them. The one that I've managed to retain**
 13 **is SLUDGEM. Salivation; lacrimation or tearing;**
 14 **urination; defecation; gastrointestinal, GI,**
 15 **hypermotility; emesis, throwing up; and a couple of**
 16 **things you can add, like miosis, m-i-o-s-i-s, which**
 17 **is pinpoint pupils; and muscle twitches. So that's**
 18 **organophosphate toxicity syndrome.**

19 **Q.** Are those signs and symptoms common for
 20 all organophosphates?

21 **A. I think some more than others. Some are**
 22 **more like -- I mean, there are several**
 23 **organophosphates. I think some are more likely to**
 24 **produce more severe symptoms than others.**

25 **Q.** You mentioned, for example, some of these

1 symptoms on the side, salivation. And you can take
 2 a seat if you want. You mentioned salivation.
 3 Would you expect that a -- is there a degree of
 4 salivation that you would be looking for if someone
 5 was suffering from organophosphate exposure?

6 **A. Excessive, I think, to the point where**
 7 **you notice where you'd say hey. This experience,**
 8 **salivating excessively, they would probably tell**
 9 **you that. And non -- the tearing, for reasons that**
 10 **aren't emotional. That's what the lacrimation is.**
 11 **Tearing.**

12 **Q.** Do you have any idea, Doctor, how much of
 13 an organophosphate a person would have to consume
 14 before they become ill from it?

15 MS. DO: Your Honor, I'm going to object on
 16 vagueness and ask there be a specification of the
 17 absorption mechanism, whether it's ingestion,
 18 inhalation or absorption.

19 THE COURT: Okay.

20 As to form, Mr. Hughes.

21 **Q.** BY MR. HUGHES: Doctor, are there
 22 different ways a person can become exposed to
 23 organophosphates, to poison?

24 **A. Yes.**

25 **Q.** What are those ways?

1 **A. Well, they can eat it. They can inhale**
 2 **it, and probably also be trans absorbed across the**
 3 **skin.**

4 **Q.** Do you have an idea of how much of the
 5 toxin someone would have to absorb before they
 6 became noticeably ill from it?

7 **A. You know, I suppose it depends on the**
 8 **toxin. Some of these organophosphates are**
 9 **extremely potent in very small quantities.**

10 **Q.** What sort of organophosphates would be
 11 extremely potent in small quantities?

12 **A. Well, sarin. I think it's s-a-r-i-n.**

13 **Q.** Is that a nerve gas used in warfare?

14 **A. Well, sometimes it's found on trains in**
 15 **Japan. But it's generally not used for pesticide**
 16 **control. Most organophosphates that people are**
 17 **exposed to come from its use as a pesticide. So**
 18 **malathion, parathion. Those sorts of pesticide are**
 19 **organophosphates.**

20 **Q.** If we limit the question, then, to the
 21 sort of pesticide organophosphates and not the
 22 nerve gas ones, do you have any idea how much you
 23 would have to consume before you had noticeable
 24 signs of illness?

25 **A. I don't know.**

1 MS. DO: Your Honor, I'm going to object and
2 ask for additional foundation.

3 THE COURT: Dr. Mosley answered he did not
4 know.

5 THE WITNESS: Yes.

6 THE COURT: Go ahead, Mr. Hughes.

7 Q. BY MR. HUGHES: But it is correct you, as
8 a medical examiner, have never seen a patient come
9 to you who has actually consumed enough to be
10 deceased?

11 A. That's correct.

12 Q. When you were in medical school, did you
13 ever see a patient who had consumed
14 organophosphates and then come to the place where
15 you were doing, say, your residency or your medical
16 school for treatment?

17 A. No.

18 Q. Do you know with respect to those
19 syndrome symptoms that you've mentioned there,
20 whether tachycardia or bradycardia would play a
21 role?

22 A. I'm sorry. I think that they might both.
23 I think it would be -- I'm trying to remember the
24 chemistry here. I think it would be bradycardia.

25 Q. Can you explain to us what bradycardia

1 is.

2 A. A slowing of the heart rate. I'm not
3 sure --

4 Q. Let me ask you this: Depending on the
5 substance that's been ingested, would you expect to
6 see all of those signs and symptoms, some of the
7 signs and symptoms, or even none of the signs and
8 symptoms?

9 A. So given a sufficient toxic dose,
10 whatever that might be -- you know -- I honestly
11 think that whether you see them or not depends on
12 the dose. Which ones you see depends on the dose.
13 There is probably a hierarchy of what's
14 more likely to occur at a low level versus what you
15 might get only at a high level of organophosphate
16 toxicity. But I'm not sure what those levels are
17 and what the order of sensitivity of a poisoned
18 person to those findings are.

19 Q. You mentioned that if you take away or
20 don't consider whether or not organophosphates were
21 used at the scene, based on your review of
22 Ms. Neuman's records, they appeared at least to be
23 consistent with exposure to organophosphates.

24 Can you expound on that and tell us what
25 it is about the records that you noted that

1 appeared to be consistent with exposure to
2 organophosphates. And you can use the easel.

3 A. Thank you. Ms. Neuman had miosis, which
4 is the pinpoint pupils, which can be caused by
5 organophosphate toxicity. And I think she also
6 had --

7 MS. DO: Your Honor, I'm sorry. I'm having
8 trouble hearing the doctor.

9 Q. BY MR. HUGHES: Doctor, I don't know if
10 that mic will reach over there or not.

11 A. She had miosis, which is the pinpoint
12 pupils. And I believe she also had frothy sputum,
13 from what I've been told. I'm sorry. That's what
14 I've been told. I can't remember where in the
15 records that was. But --

16 Q. Do you remember who told you that?

17 A. I'm sorry. I'm blanking on that. I
18 think -- well, during the course of my last
19 interview or the second-to-the-last interview with
20 defense counsel, I was told that three people --
21 yeah. I'm not sure where I got that from.

22 I'm assuming that she had -- I know she
23 had pinpoint pupils because that was pretty well
24 documented in the records.

25 As far as frothy sputum, I think what I

1 heard was that multiple people said she had frothy
2 sputum. I'm not sure if that's in evidence or not,
3 but I do have a feeling.

4 Q. Is that something you may have been told
5 by someone during your interview?

6 A. It might have been. I'm sorry. I'm not
7 exactly clear on that right now.

8 Q. Do you know what other things you saw in
9 the medical records on that list?

10 A. Well, these are nonspecific findings.
11 But I believe she had defecation, which I often see
12 that, unfortunately, in that people who present to
13 my office -- a loss of continence.

14 Q. Would you put a check or maybe just a
15 mark. I want to go back and ask you about some of
16 those.

17 A. Let's say assuming that the mechanism
18 that produces salivation also produces frothy
19 sputum from whatever source, either the salivary
20 glands or in the lungs somehow. I'll give that a
21 check. Defecation. I'm not sure about
22 gastrointestinal hypermotility. A lot of people at
23 the scene had emesis. That's also vomiting.
24 That's also a very nonspecific finding.

25 So I would say we can assume that there

1 is some sort of salivation, defecation and the
2 miosis. Probably the miosis is the most specific.
3 But even still it's not that specific. There are
4 other causes -- multiple other causes of miosis.

5 Q. What are some of the causes of miosis?

6 A. Hypercapnia.

7 Q. And can you tell us what hypercapnia is.

8 A. It refers to too much carbon dioxide.

9 The amount of carbon dioxide in the air we
10 breath -- it's very small. And it's less than a
11 10th of a percent. If it should elevate, it will
12 cause reflexes to occur, automatic reflexes, to get
13 you to take in more air, to breathe harder. And
14 when those are activated as a result of
15 hypercapnia, one of the things that also happens is
16 miosis.

17 Q. Now, based on -- and I'm going to ask you
18 a hypothetical. Assuming you had an enclosed
19 structure, like the sweat lodge in this case, that
20 did not allow much air to transfer in and out, and
21 you had somewhere between 40 and 60 people in that
22 structure, would you expect carbon dioxide levels
23 to be elevated inside?

24 A. Yes.

25 Q. Why is that?

1 A. Well, because we breathe in oxygen, and
2 we expel CO2. And if there is a lot of CO2
3 expulsion occurring in a closed environment over
4 time, I would expect the CO2 level to rise.

5 Now, I can't prove that that happened.
6 But it's something I might expect to have happened
7 based purely on a lack of air flow and multiple
8 people in a small space breathing.

9 Q. And once you get out of that small -- for
10 the hypothetical, say, I'm in this space with 40 to
11 60 other people and I'm breathing what they're
12 breathing, and they're breathing what I'm breathing
13 for quit a while, an hour or more. If I stop
14 breathing inside and am carried out, would the
15 level or would the effect of the carbon dioxide on
16 me, including on my eyes, be noticeably different
17 than on someone who is able to come outside and
18 keep breathing on their own?

19 A. Yes. For one, the carbon dioxide
20 exposure would be uninterrupted. And there are
21 very old studies on this. But if you increase the
22 CO2 in a person's blood, the variety of mechanisms,
23 you can get -- so pupil size and blood CO2 are
24 inversely proportional. So if CO2 in the blood
25 goes up, pupils shrink.

1 Q. Now, with respect to the pinpoint pupils
2 or this miosis, if I come out of the lodge and I'm
3 able to start breathing the fresh air outside, how
4 quickly could my pupils return to a normal state,
5 assuming I'm otherwise healthy?

6 A. I didn't find an article that really went
7 into how long that takes. But it would, I think,
8 depend on the acidity of the blood and how quickly
9 the CO2 dissolved in your blood is taken off.

10 Q. And you mentioned the hypercapnia as a
11 possible cause for miosis. Are there some other
12 possible causes for miosis that might present
13 themselves in a situation such as Ms. Neuman's
14 case?

15 A. Well, brain damage is ensued because this
16 is all nervous system related. If the centers that
17 control pupil size are affected, then -- you
18 know -- you might get a brainstem level miosis.
19 But --

20 Q. Is that something that would be
21 reversible?

22 A. No.

23 Q. Do you know whether there was any brain
24 damage in Ms. Neuman's case?

25 A. Well, there was. Yeah.

1 Q. And how is it that you know that?

2 A. Based on the clinical information
3 provided to me.

4 Q. Do you know whether the brain damage that
5 Ms. Neuman suffered was such that it could or could
6 not cause the miosis that was observed?

7 A. It's a complicated system. And I can't
8 tell you whether her brain damage would have
9 affected it one way or the other.

10 Q. You mentioned a few minutes ago that
11 organophosphates clear out of the body relatively
12 quickly. Do you know how long it takes?

13 A. I don't.

14 Q. At some point once an organophosphate is
15 cleared out of the body, what would you expect --
16 if a person was suffering from organophosphate
17 poison, what would you expect to see happen to
18 their pupils?

19 A. They return to normal.

20 Q. In Ms. Neuman's case, did she have any
21 transfusions or additions of blood?

22 A. I'm not sure about whole blood, but blood
23 products for sure.

24 Q. And would you have an opinion in
25 Ms. Neuman's case how long those organophosphates

1 might have stayed circulating in her body before
 2 they would be gone?
 3 **A. I don't know.**
 4 **Q.** Okay. Moving up the list, you mentioned
 5 emesis. And you said that is vomiting or throwing
 6 up?
 7 **A. Yes. Vomiting.**
 8 **Q.** And is that something that is specific to
 9 the poisoning of organophosphates?
 10 **A. Not at all.**
 11 **Q.** Is emesis something that you would expect
 12 to see in people who were suffering from heat
 13 exhaustion?
 14 **A. Yes.**
 15 **Q.** Is miosis something that you would expect
 16 to see in someone suffering from either heat
 17 exhaustion or heat stroke?
 18 **A. No.**
 19 **Q.** Do you know whether miosis is something
 20 that heat stroke can cause?
 21 **A. Is miosis something -- I don't know. I**
 22 **don't know if it can or cannot. But it's not**
 23 **typically associated with -- in the heat stroke**
 24 **syndrome, there is no check box for pupil changes.**
 25 **Q.** You testified earlier that people can

1 present in different stages of suffering from heat
 2 stroke?
 3 **A. Yes.**
 4 **Q.** In other words, you can get the little
 5 boy out of the car after he's been in there for
 6 maybe 30 minutes as opposed to when he's been in
 7 the car for an hour and a half?
 8 **A. Yes.**
 9 **Q.** Depending on the -- the -- correct me. I
 10 don't want to put words -- incorrectly say what you
 11 testified to earlier. But you said the severity of
 12 the symptoms can depend on the amount of heat and
 13 how long you're exposed to the heat?
 14 **A. Exactly.**
 15 **Q.** And on the level, then, of symptoms that
 16 you would expect from heat stroke, if you fall on
 17 the most severe side where you've stopped breathing
 18 and your heart is stopped, at that point on that
 19 spectrum from heat stroke, would it surprise you to
 20 see someone who was exhibiting miosis?
 21 **A. I'm sorry. Can you run that by me one**
 22 **more time, Counsel, please.**
 23 **Q.** That maybe is a disjointed question. If
 24 you're talking about a patient who is on the
 25 extreme end of heat stroke where they've actually

1 stopped breathing and their heart is stopped; in a
 2 person such as that, would it be surprising to see
 3 something like miosis?
 4 **A. I think it would be surprising.**
 5 **Q.** And would you expect to see any sort of
 6 brain damage in a person like that?
 7 **A. Yes.**
 8 **Q.** And would you expect to see the sort of
 9 brain damage that could cause the miosis?
 10 **A. Possibly.**
 11 **Q.** And moving back up the list, there is
 12 defecation. Is that something that was observed in
 13 Ms. Neuman?
 14 **A. Yes.**
 15 **Q.** And do you know where -- was it observed
 16 by the EMS providers or at the hospital or at what
 17 point it was observed?
 18 **A. I think it was very early on in her**
 19 **presentation. It might have been in flight or in**
 20 **the ER.**
 21 **Q.** And is defecation something that's
 22 specific to exposure to organophosphates?
 23 **A. No.**
 24 **Q.** And can you tell us some of the other
 25 things that might cause a person -- other than just

1 normal -- you know -- daily functions, what would
 2 cause the sort of defecation that you're speaking
 3 about?
 4 **A. Well, I can't think of any specific**
 5 **condition that aside from -- it's hard to say**
 6 **because it's a normal, daily function that people**
 7 **defecate in a nonsyndromic manner every day. So to**
 8 **assign a pathological condition -- it's so**
 9 **nonspecific, I have a hard time answering that**
 10 **question.**
 11 **Q.** The -- I think we talked earlier about
 12 whether a person who becomes severely ill and has a
 13 loss of consciousness, whether that can affect
 14 their ability to control their airway so that
 15 they're breathing?
 16 **A. Yes.**
 17 **Q.** Can that level of loss of consciousness
 18 also affect a person's ability to control their
 19 bowels?
 20 **A. Yes.**
 21 **Q.** And is that level of consciousness -- is
 22 there a scale that's used by doctors and medical
 23 providers in assessing a person's level of
 24 consciousness?
 25 **A. Yes. There is the Glasgow Coma Scale,**

1 **which I hope you won't ask me for the details of.**

2 **Q.** Well, let me ask you this: And I'm going
3 to show you the Exhibit 365, which are Flagstaff
4 Medical Center records that contain the Guardian
5 Air record, the air ambulance record.

6 Does that record show you what the
7 Glasgow Coma Scale is at different times -- and
8 I'll point out to kind of speed things up. We're
9 almost at lunch -- at different times for
10 Ms. Neuman?

11 **A. Yes. So it has three categories. And**
12 **she's listed at 1825 as 1, 1 and 5. And I'm sorry.**
13 **I can't tell you what each category is.**

14 **Q.** I'm sorry, Doctor. Can you speak into
15 the microphone?

16 **A. At 1825 hours, 6:25 in the evening, the**
17 **flight records indicate that her Glasgow Coma Scale**
18 **is 1, 1, and 5. And I'm sorry, but -- well, that**
19 **would suggest that she's very comatose. The higher**
20 **the number, the better off you are. But a 1 is**
21 **bad, a 1 is bad. Five is better. But I can't --**
22 **I'm not familiar enough with the criteria of each**
23 **to tell you exactly what that means.**

24 **Q.** You indicated, though, that it appears
25 that she would be comatose based on that score?

1 **A. Yes.**

2 **Q.** And would the loss, then, of bowel
3 functions in a comatose patient be something that
4 would be unusual?

5 **A. No.**

6 MR. HUGHES: Your Honor, would this be a good
7 time to stop?

8 THE COURT: Yes. Thank you, Mr. Hughes.

9 Ladies and gentlemen, we will take the
10 noon recess. Please remember the admonition.
11 Please be reassembled at 1:30. I have to recess
12 for another hearing -- another case at 4:00.

13 Remember the admonition.

14 And, Dr. Mosley, you're excused at this
15 time too.

16 We will be in recess.

17 (Recess.)

18 (Proceedings continued outside presence
19 of jury.)

20 THE COURT: The record will show the
21 presence of Mr. Ray and the attorneys. And the
22 jury is about to come back. I was informed there
23 was apparently a legal issue to discuss perhaps.

24 Mr. Kelly.

25 MR. KELLY: Judge, we find ourselves in

1 somewhat of an unworkable position. I think you
2 just heard some testimony from Dr. Mosley regarding
3 carbon dioxide. We have searched the record during
4 the lunch and have not found any reference to
5 carbon dioxide by the doctor prior to today.

6 If I may approach, Judge?

7 THE COURT: Uh-huh.

8 MR. KELLY: Procedurally, Judge, I believe on
9 April 13, the Court entered an order finding a
10 Brady violation. And now we have an email on the
11 15th where Dr. Mosley was provided a copy of
12 Dr. Haddow's report.

13 THE COURT: Okay.

14 MR. KELLY: And, Judge, if you recall in our
15 earlier discussion this morning in regard to the
16 redirect examination of Detective Diskin, I would
17 refer you to at 3:22 p.m. in the afternoon page 181
18 of the contemporaneous transcript.

19 And the exact question was, is that
20 consistent -- excuse me. Backing up,
21 Detective Diskin testified, I believe that the
22 deaths were a result of a combination of heat plus
23 carbon dioxide.

24 And the exact next question was, is that
25 consistent with the information that you learned

1 from the man named Rick Haddow?

2 Again, Judge, I don't want to beat this
3 horse to death, but we stood up here yesterday
4 afternoon, and I was limited during
5 cross-examination in regards to discussing the
6 content of Mr. Haddow's report, the exculpatory
7 nature of that report.

8 And then the prosecutor clearly asked a
9 question using his name as to the substance of the
10 report and it's inculpatory nature. And we just
11 heard today from Dr. Mosley for the first time --
12 Ms. Do reviewed her prior interviews. And for the
13 first time we hear the word "carbon dioxide" as a
14 contributing factor, and then find out going
15 through our emails that despite your ruling that
16 there was a Brady violation. They took the Brady
17 material and disseminated it to the doctor.

18 Again, I don't know how to describe this
19 other than as unworkable. And the only possible
20 remedy would be a mistrial with prejudice. This
21 appears to be purposeful conduct. Your ruling was
22 clear. And yet they attach that to a testifying
23 witness who is an expert, who a few moments ago
24 again discusses carbon dioxide after we've been
25 precluded mentioning anything to that effect.

1 We've submitted, I believe, three
2 requested contemporaneous jury instructions, which
3 two of three have not been read to this jury. One
4 was read before the cross-examination of
5 Detective Diskin.

6 But I think, Judge -- I would submit that
7 we're past the point of being able to cure this
8 deficiency. And unfortunately the only remedy is a
9 mistrial. And then we would request time in which
10 to brief whether or not that mistrial is with
11 prejudice or not.

12 THE COURT: Before the state responds,
13 Mr. Kelly, I don't remember saying, could not
14 inquire about the report. I thought you were just
15 saying we don't want to open this up. We're going
16 to stay away from it.

17 Because I indicated you could use that
18 information if you wanted, but the state was not.
19 I think that was the gist of it.

20 But if you didn't go into it, it wasn't
21 because you couldn't have. It's just then we're
22 going to have that issue of is the door open? Then
23 now we can talk about this or that.

24 I don't recall ordering that you could
25 not go into this if you wanted to. I don't think

1 this changes the posture of what you're talking
2 about to any great extent.

3 But I just wanted to clear that up.

4 MR. KELLY: And, Judge, I believe, and we
5 would all agree, that the record speaks for itself.
6 Just to correct Ms. Polk's statement from earlier
7 today, she did mention Rick Haddow's name. She did
8 talk about inculpatory information. I never did.
9 So the door was never opened.

10 THE COURT: I know. But I'm saying you
11 indicated I ordered or something you can't talk
12 about that. And I did not, to my knowledge. If I
13 did, it was really inadvertent.

14 MR. KELLY: My recollection, Judge, is there
15 was strenuous objections from the state. I had
16 three specific questions that we agreed upon.
17 April 19 you received the email. You bumped it to
18 the county attorney. 29 days after trial we
19 received that information, and the result was a
20 continuance. And those are the three specific
21 questions I asked after lunch yesterday.

22 And I -- if I misunderstood the Court's
23 ruling, I did. But I was under the belief that I
24 could not ask the exculpatory information. And
25 I'll stand corrected if that's not your ruling.

1 More importantly, Judge, is, again, the
2 root of this problem is a Brady violation.

3 THE COURT: I don't want to leave the point
4 you just raised. What would have happened if you
5 asked more is we were going to be into a door-open
6 kind of situation. That's the way I looked at it
7 at the time. It wasn't, as far as I'm concerned,
8 because of that late disclosure, whatever you
9 wanted to ask about that.

10 But when that happens -- you know -- what
11 is the continuing sanction for the state to not be
12 able to go not back into it and all the discussion,
13 and so you asked the three questions? But I
14 thought it was to avoid -- just to move on with
15 this, leave it alone, except for the discovery
16 aspect, which was covered.

17 But anyway, that's my interpretation of
18 that.

19 MR. KELLY: Of course, the real problem now
20 is -- and when I use the term "unworkable," we're
21 now in a position of having -- and I'll use the
22 word "infected" -- that the witness opinions now
23 are infected by a document which this Court clearly
24 found to be a Brady violation.

25 And so Ms. Do for the first time on

1 direct examination hears this doctor use the word
2 "carbon dioxide," which has never been mentioned.
3 So it's more than the Rule 15 violation, why I
4 assumed, which I looked up. And they were
5 obviously obligated to disclose that information.
6 What we're doing -- what the state's,
7 essentially, doing is back dooring in the
8 inculpatory nature of a report upon which you found
9 a Brady violation. That's what makes, in our mind,
10 unworkable.

11 THE COURT: The word that caught my attention
12 during Dr. Mosley's testimony was "hypercapnia."

13 MR. KELLY: Correct.

14 THE COURT: Because I'd never seen that before
15 I saw the Haddow email preliminary report. And --
16 well, Mr. Kelly, I need to ask you this, though,
17 before I have the state respond: What do you see
18 is the significance of the April 15 email, first
19 supplying to Dr. Lyon and Dr. Mosley various
20 documents, and then it shows going to defense
21 lawyers later, two minutes later? What
22 significance do you attach to this? Because -- go
23 ahead.

24 MR. KELLY: Three points, Judge. First of
25 all, typically in a criminal case the state rebuts

1 the defense case during its rebuttal, not during
2 it's case in chief. Apparently what they're
3 attempting to do by coaching witnesses in advance
4 of their testimony is to rebut Mr. Li's opening
5 argument. I've never seen that. But apparently
6 that's going on.

7 The second is, of course, as I've
8 mentioned, a disclosure violation. Because if an
9 expert witness is going to provide an opinion as to
10 a medical basis or some term of physiology which
11 underlies his ultimate opinion as to the cause of
12 death, such as hypercapnia or carbon dioxide, that
13 has to be disclosed. We can't be caught off guard
14 right there in the middle of a jury trial.

15 And then, finally, and most importantly,
16 Judge, and this is what I ask you to consider: I
17 believe that shows the purposeful nature of the
18 violation, the fact that a court would rule that
19 this is a Brady violation, that this material
20 violates the United States and Arizona Constitution
21 and ignoring that court order, then sends it to
22 future testifying witnesses in advance of their
23 testimony apparently to sew up or attempt to rebut
24 Mr. Li's opening.

25 And so as to that last point, Judge,

1 that's what I would submit is the most egregious
2 violation. And, again, it leaves us in the
3 position now, looking at the names, the recipients
4 of the email and Haddow's report, has this trial
5 been so infected with unconstitutional evidence
6 that my client cannot receive a fair trial? And
7 we're submitting it has. It's a mistrial. And if
8 it's purposeful, it's with prejudice.

9 THE COURT: Mr. Hughes, did you discuss any
10 connection between hypercapnia and miosis with
11 Dr. Mosley?

12 MR. HUGHES: Your Honor, I have not discussed
13 that. In fact, I was commenting at lunch that was
14 the first I heard about the fact that hypercapnia
15 could cause miosis.

16 But I would like to address some --

17 THE COURT: Okay. I'm going to give you that
18 opportunity obviously. But -- well, go ahead,
19 Mr. Hughes.

20 MR. HUGHES: Thank you, Your Honor. First of
21 all, after the Haddow report became known to the
22 state, we did provide it to experts --

23 (Pause in proceedings.)

24 THE REPORTER: We did provide it to experts?

25 MR. HUGHES: We did provide that and a number

1 of other things, including medical records of the
2 participants which we wanted the experts to review.
3 If you remember, this issue had come up with
4 Dr. Lyon. And the Court ruled if we were providing
5 additional information to the expert, the defense
6 should have an opportunity to interview the expert.

7 We inquired of Dr. Lyon. If the Court
8 recalls, Dr. Lyon said he didn't look at anything.
9 So I believe the defendant -- and they may have
10 interviewed him anyway. I don't recall if they did
11 or did not.

12 However, with Dr. Mosley the defense did
13 avail itself and conducted an interview of
14 Dr. Mosley after this email went out. In fact,
15 they did two interviews, one on a Monday, I
16 believe, that was the 18th or the 19th.

17 And then Ms. Do informed me the next day
18 she'd forgotten to ask some questions, and we
19 allowed another interview to take place with
20 Dr. Mosley the following day, which would have been
21 the 19th or 20th. So they did have an opportunity
22 to talk to Dr. Mosley about the newly disclosed
23 information.

24 With respect to carbon dioxide,
25 Dr. Mosley mentioned carbon dioxide to the defense

1 in a defense interview in May of 2010. I'm
2 referring specifically to Defense Exhibit 683,
3 which is a defense transcript of the interview that
4 was conducted of Dr. Mosley by Ms. Do and Mr. Li.

5 And on page 33 Ms. Do -- starting on
6 line 1 Ms. Do asks the doctor if he'd discussed
7 differential diagnoses with Dr. Lyon or
8 Dr. Fischione.

9 Dr. Mosley's response to that is, sort of
10 in the sense of oxygen deprivation being so --
11 suffocation. And -- you know -- this may well have
12 occurred. So we're all -- the oxygen in the air we
13 breathe may seem like it varies widely from
14 Flagstaff to Phoenix, but it doesn't really. It's
15 always at 21 percent or something like that.

16 But you drop the oxygen content to where
17 you just say 15 percent, that can kill you if you
18 stay in that room. CO2 goes up.

19 So if the air -- the oxygen content of
20 the air is what is changing substantially or
21 dramatically -- well. I just contradicted myself
22 there. I was just saying that it doesn't have to
23 change much.

24 Mr. Li asks, a few percent is substantial
25 and important?

1 And Mosley replies, yeah.
 2 And then Mr. Li asks, okay. So go ahead
 3 and finish the thought.
 4 Mr. Mosley -- Dr. Mosley responds, it
 5 brings an annulment of suffocation and the cause of
 6 death as opposed to pure hyperthermia. But I think
 7 in consideration of that, I still felt that
 8 hyperthermia was the overriding cause of the
 9 suffocation element. While it may be present, I
 10 have no way to prove it, and then goes on from
 11 there.
 12 Ms. Do asks, and then that oxygen
 13 deprivation possibility was discussed and
 14 eliminated by all three?
 15 Mosley says, well, eliminated? I don't
 16 know if I could eliminate it. I still can't
 17 eliminate because I don't -- I just felt I couldn't
 18 prove it and what I could prove -- I would feel I
 19 couldn't prove, so to speak, with the
 20 circumstantial evidence.
 21 It was discussed, Your Honor, back in
 22 May. When Haddow's report came to light, the state
 23 did provide it. It's not my understanding that the
 24 Court when the ruling was made regarding Mr. Haddow
 25 said that -- the Court said the state and defense

1 could inquire into that, could call Mr. Haddow.
 2 When we provided this email to the
 3 different experts, it was to provide all the
 4 information that we expected they would be asked
 5 about by Ms. Do, Mr. Li and the defense team,
 6 similar along the lines of when Dr. Lyon testified
 7 and was asked a number of questions about things
 8 that had or had not been provided to him.
 9 As far as I know, there is no order that
 10 said we couldn't provide that to them. We did
 11 provide it. We let the defense know we provided
 12 it. We let the defense conduct an interview of
 13 Dr. Mosley.
 14 And the defense conducted a lengthy
 15 interview of Dr. Mosley, again, on the Monday and
 16 Tuesday of the 18th and the 19th of April. And
 17 they've had -- and then I even gave them a copy of
 18 the tape-recording of it because they had issues
 19 with a tape-recording.
 20 So this is information the defense had,
 21 information they were able to talk to Dr. Mosley
 22 about, information they inquired of Dr. Mosley back
 23 in May of 2010, Dr. Mosley's opinions about carbon
 24 dioxide.
 25 And, quite honestly, I have a number of

1 questions I haven't gotten to with the doctor about
 2 carbon dioxide. Those are part of his differential
 3 diagnosis. And it's an appropriate subject for me
 4 to go into.
 5 THE COURT: Mr. Kelly, anything else?
 6 MR. KELLY: Judge, again, I would emphasize
 7 that this is a Brady violation that we're talking
 8 about. And it's the connection between the
 9 question on redirect yesterday -- is that
 10 consistent with the information that you learned
 11 from the man named Rick Haddow, and now today for
 12 the first time a discussion from Dr. Mosley
 13 regarding carbon dioxide.
 14 I stand corrected as to the prior
 15 interview. I don't dispute that. But his cause of
 16 death now apparently has incorporated the Haddow
 17 report, which was provided to him, undisputed by
 18 the state, two days after your ruling.
 19 It's my understanding -- Ms. Do can
 20 correct me if I'm wrong -- that during the
 21 interview on April 19 that she conducted, there was
 22 no mention of basing his opinion on carbon dioxide
 23 and hypercapnia. And I think she asked him the
 24 direct question, the materials he had received, and
 25 had not mentioned Haddow.

1 So, again, we're in a situation that I
 2 can only describe as unworkable or that the
 3 remainder of this trial has been tainted now by a
 4 Brady violation that's infected the testimony of
 5 these witnesses.
 6 And it allows the back-door presentation
 7 of inculpatory information but precludes us from
 8 presenting the exculpatory information from that
 9 report, which the Court had found existed.
 10 Finally, Judge, again, I'd renew -- we
 11 believe that a mistrial is the only remedy. If
 12 that's going to be denied, then I'd ask again that
 13 our instruction regarding the Brady violation be
 14 provided to this jury today as these facts are
 15 presented in front of this jury.
 16 MR. HUGHES: Your Honor, if I can respond to
 17 that. Dr. Mosley today testified that if you take
 18 out the -- if there is no evidence of
 19 organophosphates at the scene, he is still of the
 20 opinion that hyperthermia is what killed
 21 Ms. Neuman.
 22 The doctor -- and I'm needing to go
 23 there. But the doctor is going to explain his
 24 differential diagnosis, which is the same
 25 differential diagnosis that was discussed back in

1 May, in which the doctor said back in May he didn't
2 think he could eliminate it; and he says, I still
3 don't think I can eliminate it. That was back in
4 his interview in May.

5 It's a differential diagnosis he had in
6 May. And I believe it will still be a differential
7 diagnosis he can't exclude to this day. I think
8 it's appropriate for me to ask questions about it.
9 It was something brought up in the defense
10 interview and something I certainly was expecting
11 the defense would bring up also since it's a
12 differential diagnose, the doctor said he could not
13 exclude as a cause of death.

14 MR. KELLY: Judge, could I have one thing
15 briefly? The doctor also discussed, I believe, the
16 structure of the sweat lodge before the noon break,
17 which, again, is directly related to the Haddow
18 report. And that was kind of news to us. That's
19 our record.

20 THE COURT: Well, Mr. Hughes presented a
21 question that characterized the structure. And he
22 dealt with it in that fashion. I recall that.

23 MR. KELLY: In regards to the scope of the
24 testimony, it's Ms. Do's witness; but, again, we'd
25 renew this motion and alternatively request that

1 you instruct the jury. And we've submitted some
2 Brady instructions in that regard.

3 THE COURT: Ever since the late disclosure of
4 the Haddow report, there has been a real issue,
5 serious issue, in the case. And I brought up
6 yesterday. I asked if the defense was still urging
7 the motion for the mistrial.

8 The question about Mr. Haddow -- was
9 there an objection and was that sustained in that
10 exchange?

11 MR. KELLY: No, Judge.

12 THE COURT: There wasn't an objection?

13 MR. KELLY: No.

14 THE COURT: Okay. I'm not -- and again --

15 MR. KELLY: Judge, can I explain something for
16 the record?

17 THE COURT: Yes.

18 MR. KELLY: From the beginning of Melissa
19 Phillips on, I've complained to this Court about
20 the nature of the redirect examination and that the
21 requirement that I repeatedly object to the
22 improper form of questions.

23 And, again, there is always a strategy
24 decision that takes place during -- while
25 representing someone that you appear to be

1 obstreperous in front of a jury by repeated
2 objections.

3 The record speaks for itself. I would
4 venture a guess that about 90 percent of my
5 objections were sustained during the redirect
6 conducted by Ms. Polk.

7 In addition, Judge, you had instructed us
8 not to ask for a sidebar conference and instructed
9 us that any motion for a mistrial would be made at
10 break.

11 THE COURT: But I also said, you need to ask
12 to approach. And I may not allow that. But I said
13 that would be the signal that you're there. And if
14 I heard something that rang that bell, we would
15 have the bench conference. But that was my point
16 on that is we were having so many bench
17 conferences, and we have these legal discussions.

18 And I'm well aware of the importance of
19 discussing certain legal issues contemporaneously.
20 And that was my instruction.

21 If the defense felt there was a mistrial
22 situation, to ask to approach. And I would likely
23 know what it was about, what that would be about.
24 But -- and I did say and we might do it then or do
25 it at the first break.

1 But I don't know why the state brought up
2 the Haddow report. I know that the state has had
3 their own issues with the defense, essentially,
4 testifying on cross-examination by making a
5 statement and then asking a witness sometimes
6 without knowledge, do you agree that this? Do you
7 know that this? And that was that kind of a
8 question from the other side but directly relating
9 to a Brady situation. They don't really equate.

10 At this point the motion for mistrial is
11 just, essentially, under advisement. I'm going to
12 continue today.

13 The issue of CO2. It has been in the
14 case. It was in the Grand Jury transcript to some
15 level. It's been there. The state absolutely must
16 avoid any further suggestion there is some report
17 out there that sanctions some other inculpatory
18 theory that hinges on CO2.

19 But the motion is just, essentially,
20 understand advisement right now.

21 Mr. Kelly, is this an extra copy?

22 MR. KELLY: That was my copy, Judge. But
23 perhaps we should mark it for the record. And I
24 will do that the next available moment.

25 THE COURT: That's why I'm asking. There will

1 be a copy of this Bates 008143, a copy of that be
2 made of record.

3 MR. HUGHES: I believe that may have already
4 been marked by the defense as an exhibit.

5 THE COURT: Okay. Thank you, Mr. Hughes. Do
6 you have a number?

7 MR. HUGHES: I will look through and see. I
8 know a number of my emails to Dr. Mosley have been
9 marked.

10 MS. DO: I didn't mark that one, Your Honor,
11 for cross-examination. And that is a copy the
12 Court can keep.

13 THE COURT: Okay. So 1007. And we just need
14 to make clear that is not a trial exhibit. It will
15 be kept separate for those purposes.

16 So we do have to recess at 4:00, as I've
17 indicated, for another hearing. I'm going to ask
18 that whoever is conducting the examination, please
19 break about the middle, about 10 minutes, for the
20 jury. About the middle of the afternoon.

21 Thank you.

22 (Recess.)

23 (Proceedings continued in the presence of
24 jury.)

25 THE COURT: The record will show the presence

1 of Mr. Ray, the attorneys, the jury. And
2 Dr. Mosley has returned to the stand.

3 Mr. Hughes.

4 MR. HUGHES: Thank you.

5 Q. Doctor, I think where we left off before
6 lunchtime, you were going through on the easel, and
7 we were talking about some of the signs and
8 symptoms that you found in Ms. Neuman's medical
9 records that you thought might also be consistent
10 with organophosphate poisoning?

11 A. Yes.

12 Q. We talked a little bit about miosis and
13 emesis, which is the vomiting. I think we were in
14 the middle or coming to the end of the issue of
15 defecation. Can a person whose Glasgow Coma Scale
16 is such that as is shown on that medical record
17 that we were talking about -- can that very low
18 Glasgow Coma Scale cause a person to lose control
19 of their bowels?

20 A. I believe it can.

21 Q. Moving up the list, I think you checked
22 the salivation. Can you explain what it is is
23 salivation -- I think you said excess salivation.
24 Is that a specific finding to organophosphate
25 poisoning?

1 A. It's not. But -- it's not.

2 Q. Is excess salivation something or the
3 foaming -- you said excess salivation could be
4 viewed as foaming; is that correct?

5 A. Right. That's what I -- to fit the
6 organophosphate hypothesis into the syndrome, I'm
7 assuming the excess salivation is -- might be
8 perceived as foaming.

9 Q. How much foam would you expect to see in
10 someone's mouth if they were suffering from
11 organophosphate poisoning?

12 A. I'm not sure if I know how to quantitate
13 something like that.

14 Q. Would you -- let's say, would you expect
15 a teaspoonful or a half a cupful? What would you
16 expect to see coming out of their mouth?

17 A. I would think it would be a lot, would be
18 noticeable. Probably be aware they're salivating a
19 lot. It wouldn't be a trivial amount.

20 Q. Let me ask you this: This is going to
21 seem like a strange question. But do you drink
22 coffee?

23 A. I do.

24 Q. Do know what a latte is?

25 A. I do.

1 Q. With a little bit of foam melted on top?

2 A. Uh-huh.

3 Q. If you were to see that amount of foam or
4 if a witness were to describe that amount of foam
5 was seen on a person's mouth, would you expect that
6 that would be the sort of excess salivation that
7 you would see in a person who had been poisoned by
8 organophosphates?

9 A. It might be. It might be that amount of
10 foam. It might be a lot more. It's really hard
11 for me to say how much foaming to expect from
12 organophosphate toxicity.

13 Q. I believe you testified a moment before
14 that you would expect to see quite a bit of
15 salivation. Is that correct?

16 A. Yes.

17 Q. Can you explain why it is a person who
18 has been poisoned with organophosphates would be
19 having quite a bit of salivation?

20 A. The autonomic nervous system, the
21 automatic nervous system, that functions in spite
22 of our will to function, is activated. And one of
23 those things that automatically occurs is
24 salivation. You have no conscious control over how
25 much you salivate.

1 **So in organophosphate toxicity, the**
 2 **switch is stuck on. So the impulse says salivate.**
 3 **And it's out of sync with what the body needs to**
 4 **happen. You salivate when you eat a meal. But if**
 5 **there is a toxic poisoning where the switch is**
 6 **stuck on, you just salivate without -- without any**
 7 **relation to what your body physiologically needs to**
 8 **do.**

9 **Q.** And do you have an opinion as to how long
 10 after someone was exposed to organophosphates you
 11 would continue to see that excess salivation?

12 **MS. DO:** Object to the form. Vague. Depends
 13 on the amount, as the witness has testified.

14 **THE COURT:** Sustained.

15 **Q.** BY MR. HUGHES: Doctor, are there factors
 16 that would influence how long after an exposure of
 17 organophosphates you would expect to see excess
 18 salivation?

19 **A.** **Factors that would influence how long I**
 20 **would see excess. Well, it would be a matter of**
 21 **how long it takes to wear off. And depending on**
 22 **what that organophosphate is in particular we're**
 23 **speaking of, it would vary. But -- you know -- I**
 24 **have no idea what the half-life of common pesticide**
 25 **organophosphates -- what their half life is. So I**

1 **can't really speculate on how long it would take to**
 2 **wear off.**

3 **Q.** And with respect to a person who has been
 4 exposed to organophosphates, how quickly would you
 5 expect them to start salivating?

6 **MS. DO:** Objection to form.

7 **THE COURT:** Sustained.

8 **Q.** BY MR. HUGHES: Doctor, speaking
 9 hypothetically, if a person had been exposed to
 10 organophosphates and was displaying these pinpoint
 11 pupils that we've talked about and had gotten to
 12 the point where they were unconscious and their
 13 Glasgow Coma Scale was such as you read from the
 14 Guardian Air records, would you expect at that
 15 point that if they were suffering from
 16 organophosphates, you would see the salivation?

17 **A.** **Yes.**

18 **Q.** And do you know -- is that something that
 19 you would expect to see -- if there was frothy
 20 sputum in someone's mouth or excess salivation, is
 21 that something you would expect would be included
 22 in the EMS record?

23 **A.** **It probably would be.**

24 **Q.** Do you know -- and turning your attention
 25 to the exhibit in front of you, which has the EMS

1 record, can you let us know if that was something
 2 that was actually noted by the paramedics who
 3 treated Ms. Neuman. I can show you where the EMS
 4 record is. It's right here in front.

5 Do you see where it says, Guardian Air?

6 **A.** **Yes.**

7 **Q.** Page 1 of eight. Can you look through?

8 **A.** **I don't see sputum or any reference to**
 9 **frothy sputum here.**

10 **Q.** I know there are a number of pages. Take
 11 your time.

12 **A.** **I'm not seeing it if it's in here.**

13 **Q.** Doctor, other than exposure to
 14 organophosphates, are there other things that can
 15 cause this frothy sputum?

16 **A.** **Yes. Well, typically for me, when I see**
 17 **frothy sputum, I think of narcotic intoxication or**
 18 **drug overdose. It's due to central nervous system**
 19 **depression and pulmonary edema.**

20 **Q.** What is pulmonary edema?

21 **A.** **It's, essentially, water in your lungs,**
 22 **fluid in your lungs. And the lungs have spaces for**
 23 **air to go. And when fluid is in those air spaces,**
 24 **that's pulmonary edema.**

25 **Q.** We talked earlier about someone suffering

1 from hyperthermia or heat stroke. And using the
 2 hypothetical example of the spectrum as the illness
 3 progresses for the person in the hot car, if you
 4 get to them at 15 minutes after being in the hot
 5 car, are their symptoms going to be different than
 6 if you get to them after an hour and a half in the
 7 hot car?

8 **A.** **I would think so in that -- I wouldn't**
 9 **expect them to have pulmonary edema right away in a**
 10 **hyperthermia case if that's all that's at play, if**
 11 **that's the only factor.**

12 **Q.** If you got to them, then, instead of at
 13 15 minutes but at an hour and a half, would you
 14 find it surprising that after an hour and a half in
 15 that hot car in Phoenix, they might have developed
 16 pulmonary edema?

17 **A.** **An hour and a half if there is central**
 18 **nervous system depression and their heart is still**
 19 **beating, I would expect there to be pulmonary**
 20 **edema. But -- I'm sorry. I'm really not sure how**
 21 **soon one might expect pulmonary edema to occur in a**
 22 **hyperthermia case. I don't believe it would happen**
 23 **right away, but I'm not sure how long it would take**
 24 **to develop.**

25 **Q.** You mentioned the central nervous system

1 depression. What role does the central nervous
2 system have in pulmonary edema?
3 **A. Well, the drive to move your diaphragm,**
4 **to put air in your lungs automatically, is**
5 **controlled by your central nervous system. And if**
6 **you lose that drive to breathe for whatever reason,**
7 **for example, in narcotic intoxication where**
8 **people's nervous system is so depressed they lose**
9 **the automatic impulse to move their diaphragm. So**
10 **when that's lost, there is a -- that's when**
11 **pulmonary edema develops.**

12 **Q.** You had mentioned before lunch that on
13 that spectrum in the hypothetical person in the
14 car, that at some point they would reach the point
15 where they could not control their airway and
16 continue breathing. Would you expect, if they
17 reached that point, that pulmonary edema could set
18 in?

19 **A. I'm sorry. If they're unconscious and --**

20 **Q.** Well, that was a bad question. Let me
21 ask it this way: Do you remember me asking you
22 about the Glasgow Coma Scale that the EMTs, the
23 paramedics, observed in Ms. Neuman?

24 **A. Yes.**

25 **Q.** Correct me if I'm wrong, but I believe

1 you said that at that low of a Glasgow Coma Scale,
2 you would expect that a person might no longer be
3 able to control their airway?

4 **A. Protect it.**

5 **Q.** Or protect their airway.

6 **A. Reposition themselves to make sure that**
7 **their airway is open.**

8 **Q.** And I think you said at that level they
9 might also lose the ability to control their
10 bowels?

11 **A. Yes.**

12 **Q.** Would you expect, then, the central
13 nervous system depression you were talking about a
14 moment ago -- would that be something that would
15 set in around the Glasgow Coma Scale level as
16 reflected in the Guardian Air records?

17 **A. Yes.**

18 **Q.** And if that pulmonary edema set in at
19 that Glasgow Coma Scale level that's reflected in
20 the Guardian records, would you be surprised, then,
21 to see some frothy sputum in the person's mouth?

22 **A. Not at all.**

23 **Q.** Are there other things that can cause --
24 other than the low Glasgow Coma Scale or depressed
25 central nervous system depression, are there other

1 things that can cause the frothy sputum that you
2 refer to?

3 **A. Well, a toxic -- inhalation of a toxic**
4 **substance. Toxins can sometimes cause pulmonary**
5 **edema. Other things that cause pulmonary edema are**
6 **congestive heart failure.**

7 **Q.** What's congestive heart failure?

8 **A. It's when the heart can't beat well**
9 **enough to move blood in and out of the lungs**
10 **efficiently. So there is a backup of blood moving**
11 **in -- through the lungs.**

12 **So the pressure in the vessels of the**
13 **lungs builds up, and fluid leaks into air spaces.**
14 **It's probably not the best definition of congestive**
15 **heart failure.**

16 **Give me a moment here. It has to do with**
17 **the heart not beating well enough to move the blood**
18 **around. And the blood sort of backs up.**

19 **Q.** Is that something that would affect
20 someone if they had, say, a sick heart, an
21 unhealthy lifestyle, or a long life and their heart
22 is just starting to wear out?

23 **A. Well, yeah. Coronary artery disease is a**
24 **cause of -- probably the most common cause of**
25 **congestive heart failure.**

1 **Q.** Are there any other causes, then, of this
2 pulmonary edema that you would expect to see sort
3 of a frothy sputum?

4 **A. I'm not sure at the moment.**

5 **Q.** Doctor, I believe back in May of last
6 year you gave an interview to the defense and to
7 the state.

8 Do you remember that?

9 **A. Yes.**

10 **Q.** And in that interview you mentioned
11 something about differential diagnosis for the
12 cause of death of Ms. Neuman?

13 **A. Yes.**

14 **Q.** Can you tell us what a differential
15 diagnosis is.

16 **A. Well, it's the range of possibilities of**
17 **why the person is dead, what the diagnosis is. You**
18 **consider each possible diagnosis and try to discern**
19 **which one it is.**

20 **Q.** And do you recall what your -- did you
21 have differential diagnoses for Ms. Neuman's death
22 apart from the hyperthermia due to multisystem
23 organ failure?

24 **A. I'm pretty sure I did. But I'm not sure**
25 **what I said at the moment about what the**

1 differential was. I was wondering if there might
2 have been oxygen depletion from the sweat lodge.
3 So the people in there are consuming the
4 oxygen and exhaling CO2. So -- and the
5 differential would be a sort of suffocation of
6 sorts from the lack of usable oxygen in the
7 environment and the elevated level of CO2.

8 Q. Doctor, are you familiar with symptoms
9 that are typical of a person who has ingested a rat
10 poison or mouse poison?

11 A. Rat poison is typically a Coumadin, an
12 anticoagulant type of drug where the rat -- they
13 don't clot very well, and they have a bleeding,
14 death, basically.

15 Q. In this particular case you've told us
16 about the DIC that was present in Ms. Neuman. Is
17 there a way to distinguish between a person who is
18 suffering from DIC and a person who has ingested a
19 toxic amount of rat poison?

20 A. Well, there would be chemical testing.
21 You can test their blood to see if there is rat
22 poison in their blood or look at their blood
23 chemistry, their clotting chemistry, to see if it
24 suggests some sort of Warfarinlike activity. I
25 believe you can do it. I'm not sure right now how

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1 that would be done.

2 Q. Do you know whether that's something
3 her -- Ms. Neuman's doctors looked at at Flagstaff
4 Medical Center?

5 A. I don't know.

6 Q. If a person had consumed rat poison to
7 the point that they presented in the fashion that
8 Ms. Neuman did to the EMTs, to the paramedics, what
9 effect would you expect to see, for example, in
10 their chest region after 45 minutes of CPR?

11 A. Bruising.

12 Q. And what sort of bruising would you
13 expect to see?

14 A. Well, if the rat poison has -- had a
15 chance to interrupt her ability to stop bleeding,
16 then little injuries would cause bruising.

17 I'm not sure I'm understanding the
18 question. What kind of bruising?

19 Q. In other words, would there be a slight
20 amount of bruising or a heavy amount of bruising?

21 A. It would be an exaggerated amount of
22 bruising, more so than you would expect to find
23 normally.

24 Q. Did you ever see anything in the Guardian
25 Air records that indicated that there is heavy

1 bruising around Ms. Neuman's chest?

2 A. There is no indication of heavy bruising
3 anywhere.

4 Q. Is that something you would expect to see
5 in the Guardian Air record?

6 A. If there had been a Warfarin or Coumadin
7 type rat poison involved, I would expect to see
8 bruising.

9 Q. Do you know how much -- you said
10 Warfarin. You told us a moment ago about Coumadin.
11 What does "Warfarin" mean?

12 A. It's another name for the same thing.
13 It's an anticoagulant that, I think, was developed
14 to kill rats.

15 Q. Do you have an idea of how much of a rat
16 poison, a Warfarin or Coumadin rat poison, a person
17 would have to consume before they reached a state
18 similar to -- a mental status state similar to
19 Ms. Neuman?

20 A. I don't know.

21 Q. Have you ever had to perform an autopsy
22 or determine a cause of death on a person who died
23 from consuming rat poison?

24 A. No.

25 Q. Do you know whether you could absorb

120

1 enough rat poison to even make you sick simply
2 through your skin?

3 A. I don't know if you could or not. I
4 think it would be unlikely to absorb enough through
5 your skin alone to make you sick. I suppose it's
6 possible.

7 Q. Are you familiar or do you know the signs
8 and symptoms from a poisoning by an ant poison
9 called "AMDRO"?

10 A. I'm not familiar with that.

11 Q. Have you ever in your career had to
12 perform an autopsy or a determination in the cause
13 of death from someone who was exposed to ant
14 poison?

15 A. I've never assigned the cause of death to
16 an ant poison.

17 Q. Doctor, turning back a moment to some of
18 the testimony this morning, you testified that with
19 the passage of time, the body can cool once it's
20 removed from a source of heat?

21 A. Yes.

22 Q. And can that cooling of the body quicken
23 or be enhanced if the body is wet down in some way?

24 A. Absolutely.

25 Q. Can you explain how that would work.

1 **A. Well, it's the transfer of heat from the**
 2 **body to the water to the air as it evaporates. So**
 3 **it would be predicted that if you douse someone**
 4 **with water who is too hot that they would cool off**
 5 **pretty rapidly.**

6 **Q.** When a warm body, very warm body, that's
 7 been exposed to a hot temperature is removed from
 8 that hot temperature and they're doused with cooler
 9 water, what sort of effects would you expect to see
 10 in their trunk area and their extremities of the
 11 body?

12 **A. I'm not sure. But I suppose they might**
 13 **lose that red, purple appearance from having a lot**
 14 **of dilated vessels that are trying to get the heat**
 15 **out of the blood. But they might -- their normal**
 16 **color might return as they cool down.**

17 **Q.** You mentioned the red, purple appearance.
 18 Is that the description you told us about this
 19 morning?

20 **A. I think is so. Yeah.**

21 **Q.** And if somebody was exposed to a great
 22 deal of heat, I think you said this morning that
 23 you would expect to see -- at least in me you would
 24 expect to see kind of a purplish hue to my skin.
 25 Would it be possible that I would have a red hue to

1 my skin?

2 **A. Yes.**

3 **Q.** This morning you used a term, and I
 4 forgot to ask you what it meant, which was a "late
 5 finding." Can you tell us what a late finding
 6 would be.

7 **A. What I'm referring to is something that**
 8 **doesn't happen right away; but as time progresses**
 9 **or a disease process progresses, then a late**
 10 **finding might be multisystem organ failure or --**

11 **Q.** Is multisystem organ failure a
 12 specific -- specific to heat stroke or
 13 hyperthermia?

14 **A. It's not at all specific.**

15 **Q.** And are the signs and symptoms that you
 16 discussed and listed on the chart there -- are
 17 those specific to organophosphate poisoning?

18 **A. Individually certainly not. It's the**
 19 **constellation of symptoms that suggests the**
 20 **diagnosis.**

21 **Q.** And you mentioned earlier that your
 22 differential diagnosis that you discussed in that
 23 May interview was suffocation due to too much
 24 carbon dioxide?

25 **A. I don't know if I used the word**

1 **"suffocation" at that time. But, essentially,**
 2 **that's what I was getting at.**

3 **Q.** In a patient who was exposed to a
 4 prolonged period of high heat in an environment
 5 where they were also exposed to carbon dioxide,
 6 would any of those findings that are on the chart
 7 there be surprising to you?

8 **A. Well, the salivation is something that,**
 9 **depending on what the -- depending on whether it's**
 10 **truly from stimulated salivary glands versus some**
 11 **other source, that would be surprising.**

12 **Q.** Would a bystander who observed
 13 salivation -- is that something you can determine
 14 by looking at a patient as to whether -- what the
 15 cause of the salivation is or the frothy sputum?

16 **A. Probably not.**

17 **Q.** Is that something that the --
 18 Ms. Neuman's medical record from Flagstaff Medical
 19 Center explained one way or the other?

20 **A. Not that I recall. Lacrimation, tearing.**

21 **Q.** Do you know whether there was any
 22 evidence in Ms. Neuman's medical records of
 23 lacrimation?

24 **A. I believe there was not.**

25 **Q.** And so I guess my question is,

1 specifically to the signs and symptoms that were
 2 observed or documented -- and I know you testified
 3 this morning you couldn't remember exactly if
 4 salivation was in those.

5 Are there any of the others on that list
 6 that would be surprising to you in a person who had
 7 been in an extremely hot, enclosed environment with
 8 quite a few other people breathing?

9 **A. No.**

10 **Q.** Thank you, Doctor.

11 I don't believe I have any other
 12 questions.

13 THE COURT: Thank you, Mr. Hughes.

14 Ms. Do.

15 MS. DO: Your Honor, do you want me to start,
 16 or do you want to take a break?

17 THE COURT: If you can start for a few
 18 minutes.

19 MS. DO: How far do you want me to go?

20 THE COURT: Until about 3:00.

21 CROSS-EXAMINATION

22 BY MS. DO:

23 **Q.** Good afternoon, Doctor.

24 **A. Good afternoon.**

25 **Q.** It's good to see you again. We have

1 met -- I think we met about a year ago?

2 **A. Yeah. About that.**

3 **Q.** Okay. That was in May of 2010. Mr. Li

4 and I came down to Phoenix and we interviewed you

5 at the Yavapai -- I'm sorry. I take that back. To

6 Prescott. We interviewed at the Yavapai County

7 Attorney's Office?

8 **A. That's correct.**

9 **Q.** And present on that date was also

10 Mr. Hughes? Do you remember that?

11 **A. Yes.**

12 **Q.** And Detective Diskin, who is here in

13 court today?

14 **A. Yes.**

15 **Q.** Since we met in May of 2010, you and I

16 have had a couple of more opportunities to speak on

17 the phone; correct?

18 **A. Correct.**

19 **Q.** And always present with us has been

20 Mr. Hughes; correct?

21 **A. Correct.**

22 **Q.** And do you know whether or not those

23 phone conversations between you and me have been

24 tape-recorded?

25 **A. They have been. Yes.**

1 **Q.** All right. And I believe I emailed you

2 your transcript for you to review before you

3 testified today?

4 **A. Yes, you did.**

5 **Q.** With the few minutes that I have left, I

6 just want to review with you very quickly the

7 backgrounds and qualifications. And then we're

8 going to talk about some of your testimony under

9 direct.

10 All right?

11 **A. Sure.**

12 **Q.** You indicated that you are a medical

13 examiner, and you have been so since July of 1999?

14 **A. That's correct.**

15 **Q.** That would mean that you have been doing

16 this for about 12 years?

17 **A. That's also correct.**

18 **Q.** You did 9 of those years with the

19 Maricopa County Medical Examiners; correct?

20 **A. Correct.**

21 **Q.** And that would be down in Phoenix?

22 **A. That's also correct.**

23 **Q.** During that time you were with the

24 Maricopa County Medical Examiner's Office, did you

25 work with a doctor by the name of Dr. Mark

1 Fischione?

2 **A. Yes.**

3 **Q.** And do you know whether or not

4 Dr. Fischione is on contract as a chief medical

5 examiner of Yavapai County?

6 **A. I'm not sure about the details of that**

7 **relationship, but it sounds reasonable.**

8 **Q.** All right. And you've had some dealings

9 with Dr. Fischione in connection to this case;

10 correct?

11 **A. Yes.**

12 **Q.** Now, the last three years since July

13 of 2008, you've been a medical examiner with the

14 Coconino County Medical Examiners?

15 **A. Correct.**

16 **Q.** You are board certified in anatomic and

17 clinical pathology; correct?

18 **A. I'm not board certified.**

19 **Q.** You're not board certified?

20 **A. That's correct.**

21 **Q.** Any particular reason?

22 **A. I'm bad at reading Pap smears. Yeah. So**

23 **to become board certified, you have to do a lot of**

24 **things that I never do, like read Pap smears or**

25 **know the particular molecular arrangements in**

1 **esoteric tumors, that kind of thing. So -- and for**

2 **that reason I'm not board certified.**

3 **Q.** That particular procedure is a

4 requirement to be board certified as a anatomic and

5 clinical pathologist?

6 **A. As an anatomic pathologist. And you**

7 **can't be board certificate as a forensic**

8 **pathologist unless you're board certified as an**

9 **anatomic pathologist. I passed the exam for**

10 **forensic pathology, but I never passed the exam for**

11 **anatomic pathology.**

12 **Q.** Okay. So you took it but didn't pass?

13 **A. That's correct.**

14 **Q.** Okay. I have a few more questions about

15 your medical background. The jury has heard a

16 little bit of this before. You are a forensic

17 medical examiner; correct?

18 **A. I call myself a "forensic pathologist."**

19 **Q.** And some people say, medical examiner?

20 **A. Yes.**

21 **Q.** And that means you look at deceased

22 persons to determine cause and manner of death?

23 **A. That's correct.**

24 **Q.** That would mean you are not what we call

25 a "treating physician"; correct?

- 1 **A. That's also correct.**
 2 **Q.** And by "treating physician", we mean a
 3 doctor, perhaps a family doctor, that you would go
 4 in to see as a live person; correct?
 5 **A. Correct.**
 6 **Q.** Then that would mean that in your 11
 7 years or 12 years as a medical examiner, you've not
 8 actually treated live patients; correct?
 9 **A. That's correct.**
 10 **Q.** Which would mean that you have not
 11 actually seen a patient come in with a heat
 12 illness, either hyperthermia or heat stroke;
 13 correct?
 14 **A. Correct.**
 15 **Q.** Would also mean that you've actually not
 16 seen a live patient come in with a toxic poisoning
 17 of any kind; correct?
 18 **A. Correct.**
 19 **Q.** You would only see the patient after
 20 death?
 21 **A. That's correct.**
 22 **Q.** You are aware of a branch in medicine
 23 called "emergency medicine"?
 24 **A. I am.**
 25 **Q.** And is it true or not true that heat

- 1 illnesses, including heat stroke and hyperthermia,
 2 are contained within that branch of medicine,
 3 emergency medicine?
 4 **A. They do deal with that area with**
 5 **expertise.**
 6 **Q.** All right. Do you also know whether or
 7 not within emergency medicine doctors who are
 8 trained and educated in emergency medicine also
 9 treat patients, live patients, with toxidromes or
 10 poisoning?
 11 **A. They do treat them for toxic reactions.**
 12 **Q.** Okay. So both of these kinds of
 13 illnesses that we've been talking about today --
 14 heat illnesses, on the one hand, and poisoning, on
 15 the other hand, are both things that doctors in
 16 emergency medicine would deal with with respect to
 17 live patients; correct?
 18 **A. Yes.**
 19 **Q.** Are you aware of whether or not there are
 20 pathologists like yourself or medical examiners who
 21 are not only board certified in pathology but is
 22 also board certified in emergency medicine?
 23 **A. Yes.**
 24 **Q.** And would you agree with me that if you
 25 had a medical examiner who was board certified in

- 1 emergency medicine and had the training, the
 2 education, and experience of seeing live patients
 3 with heat illnesses or poisoning would add extra
 4 experience as a pathologist seeing patients
 5 deceased after one or the other?
 6 **A. Yes. I think that that is a wealth of**
 7 **experience that would help them as a forensic**
 8 **pathologist.**
 9 **Q.** And, for example, like today I know
 10 you've given us some testimony regarding
 11 organophosphates. And you certainly have learned
 12 about it in medical school; correct?
 13 **A. Yes.**
 14 **Q.** I think you told Mr. Hughes that you
 15 haven't actually treated because you don't see live
 16 patients, anyone with any kind of poisoning.
 17 Correct?
 18 **A. That's correct.**
 19 **Q.** And so when you're dealing with a
 20 deceased person and the suspicion might be that the
 21 person died of poisoning, you sort of have the
 22 disadvantage of not having seen an actual live
 23 patient experiencing those signs and symptoms;
 24 correct?
 25 **A. Correct.**

- 1 **Q.** I heard you start to use a word a little
 2 bit earlier, and then you stopped. I think you
 3 were about to use a word called "pathophysiology."
 4 Do you know that word?
 5 **A. Yes.**
 6 **Q.** Could you tell the jury what
 7 pathophysiology is.
 8 **A. Well, it's a diseased physiology, where**
 9 **there is an alteration in normal physiology in a**
 10 **diseased way.**
 11 **Q.** And is that a common term within the
 12 medicine field?
 13 **A. Yes.**
 14 **Q.** Okay. So if I understand what you just
 15 explained, pathophysiology is a phrase that
 16 explains the processes within the body that results
 17 in the signs and symptoms of a disease that you
 18 would see. Correct?
 19 **A. Yes.**
 20 **Q.** And would you agree with me that a doctor
 21 testifying to this jury about, for example, heat
 22 stroke should know the pathophysiology of heat
 23 illnesses?
 24 **A. Yes.**
 25 **Q.** Meaning that if they're going to talk

1 about heat stroke, they should understand the
 2 processes that take place within the body that
 3 produces the signs and symptoms; correct?
 4 **A. Yes.**
 5 **Q.** We last spoke, you and I, on April 19,
 6 2011, by telephone. Do you recall that date?
 7 **A. Yes.**
 8 **Q.** And, again, Mr. Hughes was on the phone;
 9 correct?
 10 **A. Yes.**
 11 **Q.** Do you recall Detective Diskin also being
 12 on the phone?
 13 **A. I believe he was there.**
 14 **Q.** And that phone call, again, was
 15 tape-recorded; correct?
 16 **A. I believe so.**
 17 **Q.** On that date, Dr. Mosley, you had
 18 mentioned to me that you had thought about doing a
 19 sweat lodge.
 20 Do you recall that?
 21 **A. Yes.**
 22 **Q.** And you explained to me that you had
 23 thought about doing a sweat lodge so that you could
 24 see for yourself from a firsthand perspective what
 25 happens in that kind of situation.

1 Do you remember that?
 2 **A. I do.**
 3 **Q.** May I ask you if you have done that since
 4 we've spoken?
 5 **A. I have not.**
 6 **Q.** Okay. And the reason you were
 7 considering -- and this was a serious consideration
 8 on your part; correct?
 9 **A. It was.**
 10 **Q.** And you were thinking I might do a sweat
 11 lodge because you wanted the firsthand experience
 12 of understanding what heat in the sweat lodge
 13 environment might do to a body; correct?
 14 **A. Correct.**
 15 **Q.** And that was so you could determine what
 16 signs and symptoms might occur from an exposure to
 17 a sweat lodge environment; correct?
 18 **A. Yes.**
 19 **Q.** That was because not having that
 20 experience -- and let me ask you this question:
 21 Have you ever done an autopsy of a heat-related
 22 death occurring in connection with a sweat lodge?
 23 **A. No.**
 24 **Q.** And so the jury understands, you actually
 25 thought about doing a sweat lodge because you

1 weren't really quite sure what exactly happens to a
 2 body or a person exposed to a sweat lodge
 3 environment specifically; correct?
 4 **A. Not exactly. I just wanted to see for**
 5 **myself what I was considering. And the question**
 6 **you asked me about your thought processes at some**
 7 **point. So I was considering what I was telling you**
 8 **was what my thoughts were.**
 9 **And I have a friend in Flagstaff who has**
 10 **a sweat lodge. And he weekly invites people to**
 11 **participate in his sweat lodge. I've never engaged**
 12 **in it. I've never taken advantage of the**
 13 **opportunity. I thought that maybe I should. Not**
 14 **so much because I don't know what happens when**
 15 **someone develops heat stroke, but because I thought**
 16 **that the firsthand experience of the sweat lodge**
 17 **would be a unique experience and helpful from the**
 18 **standpoint of understanding what happens exactly.**
 19 **Q.** Okay. And we'll get into more details.
 20 But when you said you wanted to try and explain to
 21 me your thought processes on April 19 when we
 22 talked, since the time you conducted the autopsy of
 23 Ms. Neuman, your thought processes have kind of
 24 evolved over time; correct?
 25 **A. They have.**

1 **Q.** We'll get to that. But when we spoke on
 2 the 19th, part of your thought process is you
 3 wanted to determine for yourself by participating
 4 in a sweat lodge what exactly would happen to a
 5 body inside that environment; correct?
 6 **A. Correct.**
 7 **Q.** And you haven't done one; correct?
 8 **A. I have not.**
 9 **Q.** I'm going to switch gears really quickly.
 10 You told the jury, and the jury has heard from
 11 another medical examiner, that you determine cause
 12 and manner?
 13 **A. Correct.**
 14 **Q.** In manner you had described to the jury
 15 as being something that is entirely dependent on
 16 the history, the investigative history; correct?
 17 **A. Well, if I said, entirely dependent, I**
 18 **might have overstated it. It is a huge part,**
 19 **though, of establishing manner is what the**
 20 **circumstances are, what the history is.**
 21 **Q.** Okay. Let me try and flesh that out a
 22 little bit. If you had a gunshot case and the
 23 person was shot in the back, you could tell from
 24 that particular physical finding that the likely
 25 manner is homicide; correct?

1 **A. Well, there are factors that contribute**
 2 **to it being a homicide versus a suicide that -- I**
 3 **mean, it may well be a suicide. I'm not sure I'm**
 4 **understanding your question.**

5 **Q.** I understand. And I kind of sense that
 6 you're a little tired too. Let me try and ask that
 7 question again. Earlier I heard you tell
 8 Mr. Hughes, when you determine manner, it's not
 9 something that is scientifically derived; correct?

10 **A. Correct.**

11 **Q.** Which means that you determine manner
 12 entirely on circumstantial evidence; correct?

13 **A. Not entirely. So it's circumstantial --**
 14 **it's the circumstances in correlation with the**
 15 **findings. So if I have a story that someone shot**
 16 **themselves in the head but yet there is no evidence**
 17 **that the gun was fired from close range, then I**
 18 **have to reject the story. Because if someone**
 19 **shoots themselves in the head, of course, there are**
 20 **other findings aside from a bullet wound.**

21 **So to say I entirely rely on the**
 22 **circumstances is not completely accurate.**

23 **Q.** Okay. I -- let me make sure I have your
 24 correct testimony, then. You said the manner was
 25 dictated by the circumstances; correct?

1 **A. I may have said that. Yeah.**

2 **Q.** Okay.

3 **A. If I did, I want to correct that. It's**
 4 **not always entirely dictated by the circumstances.**

5 **Q.** Let me get to the point. In this
 6 particular case, you had told the jury that you
 7 initially considered the manner to be homicide.

8 Do you recall that?

9 **A. I do.**

10 **Q.** And to be clear, as you sit here today,
 11 you have determined based on your entire
 12 investigation the manner is accident; correct?

13 **A. Correct.**

14 **Q.** And I just wanted to spend a few minutes,
 15 two minutes, before the break with you on
 16 explaining to the jury why you had initially
 17 considered the manner to be homicide. All right?

18 **A. Sure.**

19 **Q.** You had explained that homicide is
 20 something that you would determine as being death
 21 at the hands of another; correct?

22 **A. Yes.**

23 **Q.** And in this particular case, because, as
 24 you have explained, doing an autopsy on Ms. Neuman
 25 doesn't give you any specific findings; correct?

1 **A. Not relevant to --**

2 **Q.** Manner.

3 **A. The manner of death. Yes.**

4 **Q.** Okay. So you -- in this case would it be
 5 fair to say you were entirely dependent on the
 6 circumstances at the scene?

7 **A. Yes.**

8 **Q.** And that would mean you would be entirely
 9 dependent on the circumstances reported to you
 10 either by your forensic investigator; correct?

11 **A. Yes.**

12 **Q.** Or by Detective Diskin?

13 **A. Yes.**

14 **Q.** And you had been shown an exhibit which
 15 was 886. Do you have that with you, Doctor?

16 **A. I'm not sure. I have 365. And looks**
 17 **like the sticker is falling off my autopsy report.**

18 **Q.** Okay. Let me just bring it up on the
 19 screen. And let me know if you can't see it.

20 Here it is. 886 is the report written

21 for you by your forensic investigator, Regina

22 Sotelo?

23 **A. Yes.**

24 **Q.** And Ms. Sotelo, would have, as you've
 25 explained, written this report on October 19 even

1 though it is reported out as October 29; correct?

2 **A. It is.**

3 **Q.** Okay. Now, looking at -- and you said to
 4 the jury you relied on the circumstances given to
 5 you by Ms. Sotelo in this report; correct?

6 **A. Not entirely relied on it. And I do have**
 7 **some questions about some of the things she wrote**
 8 **in it.**

9 **Q.** Because some of the facts you now know
 10 are incorrect?

11 **A. Yes.**

12 **Q.** Okay.

13 Your Honor, may we take the break?

14 **THE COURT:** Yes. We'll take the afternoon
 15 recess.

16 Relatively brief, please, ladies and
 17 gentlemen. Remember the admonition. Please be
 18 reassembled in about 10 minutes. We'll start as
 19 soon as we can after that.

20 Thank you.

21 Dr. Mosley, you're excused too.

22 (Recess.)

23 **THE COURT:** The record will show the presence
 24 of Mr. Ray, the attorneys, the jury. Dr. Mosley
 25 has returned to the stand.

1 Ms. Do, please continue.
 2 MS. DO: Thank you, Your Honor.
 3 Q. Dr. Mosley, before that quick break, you
 4 were taking a look at Regina Sotelo, your
 5 investigator's report; correct?
 6 A. **Correct.**
 7 Q. As you told this jury, you, now learning
 8 more about the facts, realize that there are a
 9 number of facts contained in that report that are
 10 just not right; correct?
 11 A. **That's correct.**
 12 Q. Let me ask you one question. You
 13 indicated initially you thought -- you believed, in
 14 your personal opinion, that the manner was
 15 homicide, which you define as death at the hands of
 16 another; correct?
 17 A. **Yes.**
 18 Q. Did you ever receive in Ms. Sotelo's
 19 report, which provided you with the circumstances
 20 at the scene, information that a witness who sat
 21 next to Ms. Neuman in the sweat lodge ceremony had
 22 conversations with her up to as late as the sixth
 23 or seventh round of the sweat lodge?
 24 A. **No.**
 25 Q. And you understand that the sweat lodge

1 ceremony consisted of eight rounds; correct?
 2 A. **Yes.**
 3 Q. And you understand that those eight
 4 rounds lasted anywhere between 10 or 15 minutes;
 5 correct?
 6 A. **I'm not sure what the documented interval**
 7 **was. But I will assume you're correct.**
 8 Q. Okay. If there has been testimony to
 9 this jury in that regard, you would defer to it;
 10 correct?
 11 A. **Yes.**
 12 Q. And in between each of those rounds, you
 13 understand that the door was then opened and people
 14 were free to leave; correct?
 15 A. **Yes.**
 16 Q. Now, in Ms. Sotelo's report or anywhere,
 17 did anyone ever tell you that there was a witness
 18 who sat next to Ms. Neuman who had conversations
 19 with her up to as late as the sixth or seventh
 20 round?
 21 A. **I don't believe so.**
 22 Q. Did anyone tell you that the
 23 circumstances at the scene include this person
 24 asking Ms. Neuman as late as the sixth or seventh
 25 round, are you okay?

1 A. **I don't recall being told that. And I**
 2 **don't recall reading that.**
 3 Q. Okay. Do you remember or know if you've
 4 seen anywhere in the materials you relied on to get
 5 the circumstances at the scene that Ms. Neuman then
 6 responded to this witness, whose name is Laura
 7 Tucker, I'm okay?
 8 A. **I'm sorry. Was the question do I**
 9 **remember reading that or --**
 10 Q. At any time during your investigation,
 11 even up to today's date, have you learned that a
 12 witness named Laura Tucker spoke to Ms. Neuman
 13 wherein she said or asked, are you okay, and
 14 Ms. Neuman replied, I'm okay?
 15 A. **I don't recall reading that. But it**
 16 **might be a detail that I ignored.**
 17 Q. Okay. Do you know whether or not
 18 anywhere in your investigation, including up to
 19 today's date, you read anywhere or saw anywhere
 20 that this witness then asked Ms. Neuman, do you
 21 need to go out?
 22 A. **I don't recall that.**
 23 Q. Do you remember seeing anywhere in your
 24 investigation that Ms. Neuman then responded, no?
 25 A. **I don't recall that either.**

1 Q. Okay. And so you wouldn't know whether
 2 or not this conversation took place up to as late
 3 as the sixth or seventh round of the sweat lodge
 4 ceremony; correct?
 5 A. **That's correct.**
 6 Q. Now, those are important facts that would
 7 have influenced your personal opinion about the
 8 manner; correct?
 9 A. **At least in my thought processes it would**
 10 **have. But ultimately it probably wouldn't have**
 11 **changed anything as far as ruling it to be an**
 12 **accident.**
 13 Q. Correct. I'm more trying to explain for
 14 the jury, and then we're going to move on, why was
 15 it you initially thought it was a homicide. You
 16 initially thought it was a homicide because the
 17 circumstances reported to you suggested death at
 18 the hands of another; correct?
 19 A. **Right.**
 20 Q. Go ahead.
 21 A. **From what I was -- from what was reported**
 22 **to me, that she didn't have a choice really about**
 23 **whether or not she was leaving, that she was**
 24 **encouraged to stay in there. And I didn't get the**
 25 **sense that there her will was in effect or that she**

1 **actively could say, I want to leave now.**

2 **Q.** Okay. So you had initially thought the
3 manner to be homicide because you believed the
4 circumstances indicated she was not free to leave;
5 is that correct?

6 **A. Yes.**

7 **Q.** And, as you sit here today, you're
8 telling the jury that that is incorrect --
9 right? -- as far as you know?

10 **A. Right. I suppose it depends on when. I**
11 **mean, if she's unconscious -- and I'm not sure**
12 **whether this happens. But presuming that sometime**
13 **after the seventh round, well, clearly there can be**
14 **no volition to leave.**

15 **But that's not what was communicated to**
16 **me at the time early on when I was thinking about**
17 **this. I didn't get the impression that between**
18 **every round that people were -- had the opportunity**
19 **to leave, that everybody had the opportunity to**
20 **leave.**

21 **Q.** So you now know that everyone was free to
22 leave; correct?

23 **A. Yes.**

24 **Q.** And you also understand now, perhaps with
25 the additional information I provided to you about

1 this conversation that Ms. Neuman had with
2 Ms. Tucker, as late as the sixth or seventh round
3 that Ms. Neuman did exercise some volition before
4 at whatever time it was that she lost
5 consciousness; correct?

6 **A. Yes.**

7 **Q.** And so when you changed your mind and
8 went from homicide to accident in December 14,
9 2009, when you had that meeting with Dr. Lyon and
10 others, you did that because it was the right call;
11 correct?

12 **A. Yes.**

13 **Q.** Now, I'd like to move on and now talk to
14 you about your investigation into the cause of
15 death. Okay?

16 **A. Okay.**

17 **Q.** You had just told this jury before we
18 took the break that your thought processes since
19 you conducted the autopsy to today's date has
20 evolved; correct?

21 **A. Yes.**

22 **Q.** So I want to talk to you about that and
23 give the jury some guide posts to understand your
24 thought processes and then your ultimate opinion
25 and conclusion today.

1 All right?

2 **A. Okay.**

3 **Q.** And I take it when you're looking down,
4 you're writing notes?

5 **A. Yes.**

6 **Q.** Okay. You're not playing with your iPad?

7 **A. No. I promise.**

8 **Q.** I think you did that with Mr. Li, and it
9 hurt his feelings.

10 **A. Sorry.**

11 **Q.** That's okay. October 8, 2009, is when
12 this accident occurs; correct?

13 **A. Yes.**

14 **Q.** And on that night Ms. Neuman is air
15 evaced out of Angel Valley to Flagstaff Medical
16 Center; correct?

17 **A. Correct.**

18 **Q.** And on that evening your office, Coconino
19 County Medical Examiner's, received notification
20 because -- Dr. Czarnecki?

21 **A. Czarnecki.**

22 **Q.** Czarnecki responded to the scene with
23 some investigators; correct?

24 **A. Yes.**

25 **Q.** And that, I would assume, was because

1 there were a number of people, including
2 Ms. Neuman, who was air evaced to Flagstaff Medical
3 Center?

4 **A. That's also correct.**

5 **Q.** And then that event of these people going
6 to Flagstaff Medical Center triggered your
7 jurisdiction in Coconino County; correct?

8 **A. Correct.**

9 **Q.** Ms. Neuman stayed at the hospital for
10 nine days in the intensive care unit; correct?

11 **A. Correct.**

12 **Q.** And she passed on October 17, 2009?

13 **A. Yes.**

14 **Q.** October 19, two days later, you conduct
15 the autopsy; correct?

16 **A. Correct.**

17 **Q.** Now, I understand you told Mr. Hughes
18 that you had some preliminary thoughts about the
19 cause. But on that date you had not reached any
20 kind of final conclusion; correct?

21 **A. Correct.**

22 **Q.** I'm going to ask you, Dr. Mosley -- you
23 indicated this is a mnemonic; correct?

24 **A. Yes.**

25 **Q.** It helps folks remember what the signs

1 and symptoms are for a cholinergic toxidrome?
 2 **A. Yes.**
 3 **Q.** Okay. I want to ask you one question.
 4 You wrote here that "D" is for defecation. It's
 5 actually diaphoresis; correct?
 6 **A. Diarrhea — the diaphoresis — there is**
 7 **another mnemonic that has diaphoresis, which is**
 8 **sweating. Diaphoresis is sweating. So yeah.**
 9 **That's also part of the toxidrome.**
 10 **Q.** Okay. I just want to clear this up
 11 before I flip it. Thank you.
 12 So diaphoresis for the "D." Defecation
 13 would actually come under "G" for
 14 gastrointestinal --
 15 **A. Hypermotility.**
 16 **Q.** You might want to spell that for Mina.
 17 **A. Yeah. Well, it's an imperfect mnemonic,**
 18 **but -- you know -- you're right. Diaphoresis would**
 19 **be a better use for the "D" than defecation. It's**
 20 **somewhat redundant with gastrointestinal**
 21 **hypermotility.**
 22 **Q.** Okay. And diaphoresis is excessive
 23 sweating; correct?
 24 **A. Yes.**
 25 **Q.** Okay. So on October 8, '09, you have the

1 accident. And then Ms. Neuman is at Flagstaff
 2 Medical Center; correct?
 3 **A. Correct.**
 4 **Q.** Then on October 17 Liz Neuman passes;
 5 correct?
 6 **A. Correct.**
 7 **Q.** Two days later, October 19, you conduct
 8 the autopsy; correct?
 9 **A. Correct.**
 10 **Q.** No conclusion on that date; correct?
 11 **A. Correct.**
 12 **Q.** Now, when you conducted the autopsy of
 13 Ms. Neuman on that date, you had some of the
 14 circumstances from the scene provided to you
 15 already; correct?
 16 **A. That's correct.**
 17 **Q.** For example, the number of folks who were
 18 taken to the hospital?
 19 **A. Taken to the hospital -- I don't know if**
 20 **I knew what that number was. I assumed it had been**
 21 **a substantial proportion. As far as the number**
 22 **goes, I'm not sure if I had that -- the number of**
 23 **folks.**
 24 **So, I'm sorry. I do have that. I did**
 25 **have that. 21 became ill and sent to local**

1 **hospital. That's what I was told.**
 2 **Q.** Okay. That's Ms. Sotelo reporting;
 3 correct?
 4 **A. Correct.**
 5 **Q.** And you wouldn't have any -- well, if the
 6 jury has heard otherwise, that it was some number
 7 less than 21, you would defer to the testimony
 8 they've received; correct?
 9 **A. Yes.**
 10 **Q.** Now, on October 19, 2009, you knew there
 11 were two people that had passed, essentially, at
 12 the scene and certainly upon arrival to the
 13 hospital?
 14 **A. Correct.**
 15 **Q.** That would be Kirby Brown and James
 16 Shore?
 17 **A. Yes.**
 18 **Q.** When you did your autopsy on October 19,
 19 2009, your autopsy is what you would call a
 20 "negative autopsy"; correct?
 21 **A. It was -- well, let me say it this way:**
 22 **It did not provide me with any findings that would**
 23 **confirm a diagnosis of heat stroke or hyperthermia.**
 24 **Q.** And that is because when you look at the
 25 anatomy of the body in an autopsy, there is nothing

1 there physically that is going to be a tell-tail
 2 sign of heat stroke; correct?
 3 **A. That's correct.**
 4 **Q.** Or a tell-tail sign of hyperthermia;
 5 correct?
 6 **A. Correct.**
 7 **Q.** And that's what you mean when you say
 8 that there are no anatomical findings that are
 9 specific for heat stroke or hyperthermia; correct?
 10 **A. Correct.**
 11 **Q.** But there are labs that you can run --
 12 correct? -- to determine whether or not there is
 13 evidence of heat stroke or hyperthermia?
 14 **A. The labs that I would run would be to see**
 15 **if there was dehydration, which usually goes along**
 16 **with heat stroke.**
 17 **Q.** Correct. And that lab is what we call a
 18 "vitreous test"; correct?
 19 **A. Right. Vitreous electrolytes.**
 20 **Q.** And I think you described it earlier as
 21 taking fluid from the eyeballs?
 22 **A. Yes.**
 23 **Q.** You would agree with me that the vitreous
 24 test for dehydration at the time of autopsy is
 25 considered the gold standard; correct?

1 **A. Well, that's the best we can do at**
 2 **autopsy is -- a better standard would be the**
 3 **electrolytes drawn from the blood at the hospital**
 4 **at the time of death or at the time of**
 5 **presentation, as close to the acute illness as**
 6 **possible.**

7 **Q.** Okay. And we'll get to that. But just
 8 generally, to determine whether or not somebody has
 9 died of heat stroke or hyperthermia, at the time of
 10 autopsy you would conduct a vitreous fluid test;
 11 correct?

12 **A. Yes.**

13 **Q.** And if the patient survives some days and
 14 was in the hospital, you would look at the
 15 chemistry for electrolyte disturbances; correct?

16 **A. That's correct.**

17 **Q.** All right. So on October 19, 2009, there
 18 was nothing in your autopsy other than excluding
 19 other possible causes of death that helped you get
 20 to a conclusion one way or the other; correct?

21 **A. Correct.**

22 **Q.** Now, you then had about four months to
 23 February -- I'm sorry. Yeah. February 2nd, 2010,
 24 when you wrote your report; correct?

25 **A. When I finalized the report. It was**

1 **probably, essentially, written sometime before**
 2 **that. But my signature doesn't appear until**
 3 **February 2.**

4 **Q.** Okay. So you -- if I understand it
 5 correctly, you drafted some of the technical
 6 language we see in Exhibit 362, your autopsy
 7 report?

8 **A. Yes.**

9 **Q.** You didn't finalize and sign and issue
 10 the cause of death until February 2nd, 2010?

11 **A. Yes.**

12 **Q.** And that would be some four months after
 13 the autopsy; correct?

14 **A. Yes.**

15 **Q.** Your report -- you concluded in your
 16 report that the cause of death of Ms. Neuman was
 17 multisystem organ failure due to hyperthermia due
 18 to sweat lodge exposure; correct?

19 **A. Yes.**

20 **Q.** And let me talk to you a little bit about
 21 your report. Do you have it in front of you,
 22 Doctor?

23 **A. Yes.**

24 **Q.** We're going to take a look at
 25 Exhibit 362. And I'm going to focus in on the last

1 page, Doctor, where you have your final summary and
 2 opinion.

3 **A. Okay.**

4 **Q.** You start your summary and opinion with
 5 this phase: Based on the autopsy findings and
 6 investigative history as available to me, it is my
 7 opinion that Lizbeth Marie Neuman died as a result
 8 of multisystem organ failure due to hyperthermia
 9 due to prolonged sweat lodge exposure. Correct?

10 **A. Yes.**

11 **Q.** Now, that phrase, based on the autopsy
 12 findings and investigative history as available to
 13 me, indicates that you were relying on
 14 circumstances outside of the autopsy; correct?

15 **A. Correct.**

16 **Q.** Circumstances off of the autopsy table?

17 **A. That's correct.**

18 **Q.** Could you explain to the jury what
 19 multisystem organ failure is.

20 **A. Essentially, it's the death of multiple**
 21 **organs for -- the proximate cause of that is**
 22 **variable. When there is a lack of perfusion to**
 23 **organs, they die. And if you include the -- that**
 24 **includes the intestines.**

25 **And sometimes when those walls break**

1 **down -- the intestinal wall -- bacteria will leak**
 2 **into blood from the -- through the intestines. But**
 3 **the end result is multiple organs fail to survive.**

4 **Q.** All right. And that's typically what you
 5 described as a late stage finding?

6 **A. Yes.**

7 **Q.** So multisystem organ failure is not
 8 something that is specific to heat stroke; correct?

9 **A. That's correct.**

10 **Q.** It's not something that is specific to
 11 hyperthermia; correct?

12 **A. Hyperthermia. Correct.**

13 **Q.** Okay. It does occur, as you told this
 14 jury earlier, in a lot of conditions?

15 **A. Yes.**

16 **Q.** The other findings that you made on your
 17 report -- jaundice and anasarca?

18 **A. Yes.**

19 **Q.** Again, jaundice indicates liver failure?

20 **A. Yes.**

21 **Q.** Not at all specific to heat stroke?

22 **A. Correct.**

23 **Q.** Not at all specific to hyperthermia;
 24 correct?

25 **A. Correct.**

1 Q. It can occur in a number of other
2 conditions?

3 A. Yes.

4 Q. The anasarca is the accumulation of body
5 fluids; correct?

6 A. Right.

7 Q. And, as you told this jury earlier,
8 that's an indication of respiratory failure?

9 A. I'm sorry. It's more than that. It's
10 also kidney failure. It's not handling the fluids
11 in your body, in your blood, very well to the point
12 where they -- well, they back up into your tissues.
13 So it's more than respiratory failure. I
14 think it speaks more to renal failure than
15 respiratory failure.

16 Q. Again, not at all specific to heat stroke
17 or hyperthermia; correct?

18 A. Yes.

19 Q. Your conclusion that we see up there,
20 Dr. Mosley -- you had indicated before it is a
21 conclusion you call "circumstantial"?

22 A. Yes.

23 Q. And by "circumstantial," can you explain
24 that to the jury.

25 A. It's based on the circumstances. So if I

1 have a reliable history as to what the
2 circumstances of death were, then I draw a
3 conclusion based on -- based on that history.

4 Q. So there are some cases where you can
5 reach a cause of death based upon noncircumstantial
6 evidence; correct?

7 A. Yes.

8 Q. Meaning perhaps findings in your autopsy;
9 correct?

10 A. Yes.

11 Q. Physical anatomical findings; correct?

12 A. Correct.

13 Q. Or an overt indication of the wound, for
14 example, a gunshot wound; correct?

15 A. Correct.

16 Q. But in this case, what you mean to tell
17 the jury is that your conclusion that we see up
18 there, that it's multisystem organ failure due to
19 hyperthermia due to sweat lodge exposure, is based
20 upon the circumstances reported to you about what
21 happened at the scene; correct?

22 A. Correct.

23 Q. I wrote up on the easel a number,
24 99.8752 percent. Do you recognize that number?

25 A. I do. It's one of my favorite numbers.

1 Q. And could you tell the jury what that
2 number is.

3 A. I think it's in response to a question
4 about what percent probability am I sure. And not
5 really having an analytical way of expressing my
6 own certainty, that's the number that I somewhat
7 facetiously came up with. But the overall
8 impression was that most of what I have to say is
9 based on the circumstances.

10 Q. As opposed to any medical facts; correct?

11 A. Well, the medical facts are part of
12 the -- well, if the medical facts were different or
13 opposed to the conclusion I drew from the
14 circumstances, then I -- well, sorry.

15 Q. That's okay. Let me try and see if I
16 understand you correctly. You're telling this jury
17 that your conclusion of hyperthermia due to sweat
18 lodge exposure is 99.8752 percent based on
19 circumstances at the scene; correct?

20 A. That's -- yes.

21 Q. And that number, then, is 100 percent
22 dependent on, for example, witness statements;
23 correct?

24 A. Yes.

25 Q. And that number up there would be

1 100 percent dependent on what the detectives also
2 tell you about the scene; correct?

3 A. Yes.

4 Q. So if I understand that number correctly,
5 then, that's about how much of your conclusion
6 could be based upon medical facts that you gleaned
7 from Ms. Neuman's records. Correct?

8 A. Well, I think your math is accurate. But
9 the number is totally facetious.

10 Q. Okay. And when you say, "facetious,"
11 what do you mean?

12 A. I mean that I don't have a way of
13 quantitating my certainty to a percentage, as I was
14 asked to do in the interview. But what I was --
15 the impression I was trying to give was most of
16 what -- that my conclusions are mostly based on the
17 investigation and the circumstances. That number
18 is ridiculous.

19 Q. I understand that. But just so the jury
20 knows, that's the number you gave me; correct?

21 A. That's correct.

22 Q. I didn't provide you with that number?

23 A. No.

24 Q. I asked you how much of your conclusion
25 was based upon the circumstantial evidence reported

1 to you; correct?

2 **A. Yes.**

3 **Q.** And in response to that question, you

4 told me with Mr. Hughes present that it was

5 99.8752?

6 **A. Correct.**

7 **Q.** Now, are you aware -- you had some

8 dealings with Dr. Lyon in this case; correct?

9 **A. Yes.**

10 **Q.** And Dr. Lyon did the autopsy of James

11 Shore and Kirby Brown; correct?

12 **A. Yes.**

13 **Q.** Are you aware that Dr. Lyon also stated

14 that his conclusion of heat stroke was 90 to

15 95 percent based upon the circumstantial evidence?

16 **A. I'm not aware of that.**

17 **Q.** Okay. So I understand you're now telling

18 us that this number is facetious. But it's pretty

19 accurate in conveying to the jury that your

20 conclusion is significantly dependent on the

21 circumstances; correct?

22 **A. I'd even say substantially dependent on**

23 **the circumstances.**

24 **Q.** Okay. So even more than what I'm

25 expressing?

1 **A. Yeah.**

2 **Q.** All right. Today -- and I might have to

3 flip this chart. I want to talk about what your

4 opinion is today. Since you conducted your autopsy

5 and issued your report on February 2nd, and in the

6 recent months the state has asked you some

7 additional questions regarding cause of death in

8 this case; correct?

9 **A. Yes.**

10 **Q.** The state in recent months had provided

11 you with additional information; correct?

12 **A. They have.**

13 **Q.** And when I say "recent months," that

14 would include while this trial has been in progress

15 with this jury; correct?

16 **A. Yes.**

17 **Q.** And do you know whether or not the state

18 asked you these additional questions, provided you

19 with the additional information, because it was

20 prompted by the defense review of the state's

21 evidence in this case?

22 **A. I believe it was prompted by the**

23 **defense's review of the state's evidence in this**

24 **case.**

25 **Q.** Okay. Defense review of the state's

1 evidence; correct?

2 **A. Correct.**

3 **Q.** Not new evidence produced by the defense;

4 correct?

5 **A. Correct.**

6 **Q.** Now, that -- those additional questions

7 that the state asked you in these recent months --

8 those questions have prompted you to reevaluate

9 your death investigation; correct?

10 **A. Yes.**

11 **Q.** And those questions have prompted you to

12 reconsider your conclusion in this case; correct?

13 **A. They have.**

14 **Q.** They've asked those questions of you, and

15 those questions have prompted, in your mind, a

16 question of whether or not this was truly a heat

17 stroke or truly a hyperthermia case; correct?

18 **A. I would say it a little bit differently.**

19 **It's caused me to question whether it's exclusively**

20 **a hyperthermia or heat-related death. I think that**

21 **there are other contributing factors in this death**

22 **that are unrelated to heat. Well, yes. Unrelated**

23 **to the heat.**

24 **Q.** Okay. So that conclusion that the jury

25 is looking at, the conclusion you reached on

1 February 2nd, 2010, has changed today, as you sit

2 here; correct?

3 **A. Yes.**

4 **Q.** And your conclusion today, what you're

5 telling this jury, is that based upon your review

6 of this additional information, the additional

7 questions asked of you by the state, leads you to

8 believe that this was not just a case of

9 hyperthermia; correct?

10 **A. Yes.**

11 **Q.** That this is not just a case of heat;

12 correct?

13 **A. Correct.**

14 **Q.** In fact, you've expressed doubts, have

15 you not?

16 **A. I have.**

17 **Q.** And this was the conversation that you

18 and I had on the phone with Mr. Hughes present over

19 the course of April 18 and April 19?

20 **A. Yes.**

21 **Q.** And what you told me and Mr. Hughes is

22 that you have doubts about what else is at play in

23 this case?

24 **A. Yes.**

25 **Q.** Meaning you have doubts about what else

1 caused the death of Ms. Neuman; correct?

2 **A. Yes.**

3 **Q.** So today, as you sit here today -- well,

4 that was a little redundant.

5 As you sit here today, you do know from

6 your review of additional information that there

7 are signs and symptoms that are inconsistent or

8 atypical of heat stroke and hyperthermia; correct?

9 **A. Yes.**

10 **Q.** As you sit here today, you're telling the

11 jury that based upon your review of the medical

12 records, the additional information, that the signs

13 and symptoms presented by Ms. Neuman on October 8,

14 2009, are consistent with a toxicity; correct?

15 MR. HUGHES: Objection to foundation as to

16 what additional information.

17 THE COURT: Dr. Mosley, if you can answer that

18 you can, you may.

19 THE WITNESS: I'm sorry. Could you repeat the

20 question?

21 **Q.** BY MS. DO: Sure. What I want to do is

22 establish first the guide posts of your conclusions

23 today, and we're going to go back and fill in the

24 details for the jury. Okay?

25 **A. Sure.**

1 **Q.** As you sit here today, based upon these

2 additional questions asked by the state in recent

3 months and the additional information that you

4 reviewed, you do know that the signs and symptoms

5 presented by Ms. Neuman at Flagstaff Medical Center

6 are consistent with a toxicity; correct?

7 MR. HUGHES: Objection to foundation as to the

8 additional information.

9 THE COURT: Again, if you can answer that,

10 Doctor, you may.

11 THE WITNESS: Yes.

12 **Q.** BY MS. DO: Your answer is yes; correct?

13 **A. Yes.**

14 **Q.** Consistent with a toxicity?

15 **A. Yes.**

16 **Q.** And specifically, Doctor, you looked at

17 whether or not the signs and symptoms presented by

18 Ms. Neuman at the hospital were consistent with

19 organophosphate toxicity; correct?

20 **A. Yes.**

21 **Q.** And your conclusion as to that was?

22 **A. That I could not exclude organophosphate**

23 **toxicity as a contributing factor.**

24 **Q.** Based on your review of the medical

25 records; correct?

1 **A. Correct.**

2 **Q.** And when I write "OP," I mean

3 organophosphates. Now, we're going to talk a

4 little bit more about what organophosphates are.

5 You do understand that organophosphates are

6 commonly referred to as "pesticides" or

7 "insecticides"; correct?

8 **A. Yes.**

9 **Q.** It's a compound found in pesticides or

10 insecticides?

11 **A. Yes.**

12 **Q.** When you say you cannot exclude

13 organophosphates, is that because the signs and

14 symptoms you looked at in Ms. Neuman's records are

15 consistent with organophosphate toxicity?

16 **A. Yes.**

17 **Q.** And you told me all of this on April 18

18 and April 19 when Mr. Hughes was on the phone;

19 correct?

20 **A. Yes.**

21 **Q.** Now, you know that Dr. Cutshall,

22 Dr. Brian Cutshall, is the ER doctor, or the ICU

23 doctor, rather, who treated Ms. Neuman while she

24 was at Flagstaff; correct?

25 **A. Correct.**

1 **Q.** And you know that because you reviewed

2 the medical records again?

3 **A. Yes.**

4 **Q.** If Dr. Bret -- Brent, actually, Cutshall

5 testified to this jury on March 29, 2011, that he

6 could not exclude organophosphates based upon what

7 he saw in Ms. Neuman, your testimony now would be

8 consistent with that; correct?

9 **A. Yes.**

10 **Q.** Dr. Lyon, who you know conducted the

11 autopsies of Ms. Brown and Mr. Shore -- if he were

12 to testify to this jury on March 31st, 2011, that

13 he could not exclude organophosphates, your opinion

14 today is consistent with that; correct?

15 **A. It is.**

16 **Q.** I want to talk to you about what prompted

17 this reevaluation of your conclusion.

18 **A. The organophosphate hypothesis that was**

19 **floated. So I had to look at it all anew and see,**

20 **well, what is and isn't consistent with**

21 **organophosphate toxicity.**

22 **Q.** And when you say "hypothesis," you're

23 talking about specifically the conclusions rendered

24 by Dr. Ian Paul, a medical examiner retained by the

25 defense in this case; correct?

1 **A. I believe so. I don't know if I have the**
2 **transcript of when he said organophosphates, but**
3 **I'm told that's what he said.**

4 **Q.** All right. We're going to cover that.
5 But I just want the jury to understand what exactly
6 prompted your reevaluation of the facts and your
7 conclusion in this case.

8 **A. Yes.**

9 **Q.** It originated with the defense expert,
10 Dr. Ian Paul; correct?

11 **A. It did.**

12 **Q.** Now, if I understand correctly, the state
13 provided you a copy of Dr. Paul's report in this
14 case? Correct?

15 **A. It did. The state did.**

16 **Q.** Go ahead.

17 **A. I'm sorry. I was just checking my**
18 **sentence. I meant to say the state did.**

19 **Q.** The prosecutors did; correct?

20 **A. Yes.**

21 **Q.** And they provided you that report shortly
22 after the defense provided it to them; correct?

23 **A. Correct.**

24 **Q.** So it would be approximately near the
25 date that the report was written; correct? If you

1 know.

2 MR. HUGHES: Object to foundation.

3 THE COURT: If you have knowledge of that,
4 Doctor.

5 THE WITNESS: I don't remember what date the
6 report was written, and I'm not sure when it was
7 provided to me. So for me to confirm would be --
8 I'm not --

9 **Q.** BY MS. DO: We don't want you to
10 speculate. That's okay. You believe you got the
11 report shortly after it was disclosed though;
12 correct?

13 **A. Yes.**

14 **Q.** Dr. Mosley, I'm going to show you what's
15 been marked for identification as Exhibit 1000.
16 You recognize the name at the top of this report?

17 **A. I do.**

18 **Q.** Dr. Ian D. Paul?

19 **A. Yes.**

20 **Q.** The date of January 10, 2011?

21 **A. Yes.**

22 **Q.** And is that the date of the report that
23 was provided to you?

24 **A. Yes.**

25 **Q.** That began your reevaluation of the case;

1 correct?

2 **A. It did.**

3 **Q.** Now, you reviewed that report after
4 receiving it; correct?

5 **A. Yes.**

6 **Q.** And after you received that report, you
7 did become aware that the prosecutor, Ms. Polk and
8 Mr. Hughes, interviewed Dr. Paul on or about
9 January 31, 2011; correct?

10 **A. Yes.**

11 **Q.** And shortly after that interview, if not
12 that same day, you received a phone call from
13 Detective Diskin; correct?

14 **A. Yes.**

15 **Q.** And in that phone call Detective Diskin
16 told you that Dr. Paul believes that the medical
17 findings in this case are inconsistent with heat
18 stroke; correct?

19 Let me rephrase that.

20 MR. HUGHES: Objection. Let the witness
21 answer.

22 MS. DO: Certainly.

23 **Q.** I thought you were having trouble, so I
24 could rephrase it.

25 **A. Inconsistent with heat stroke, I'm not**

1 **sure. Well, let me answer this way: He did point**
2 **out that there are findings that are inconsistent**
3 **with heat stroke.**

4 **Q.** When you say he pointed out, you mean
5 Dr. Paul?

6 **A. Yes.**

7 **Q.** All right. And you knew that; correct?

8 **A. Yes.**

9 **Q.** You also knew from this phone call that
10 Detective Diskin made to you after the state
11 interviewed Dr. Paul that Dr. Paul believed this
12 case to be one in which people were poisoned;
13 correct?

14 **A. Yes.**

15 **Q.** A toxicity of some kind; correct?

16 **A. Yes.**

17 **Q.** And that his No. 1 suspect, given the
18 signs and symptoms, was organophosphates; correct?

19 **A. Correct.**

20 **Q.** And it is Dr. Paul's conclusions as --
21 Dr. Mosley? Dr. Paul's conclusion, as you read in
22 his report and as also supplemented by
23 Detective Diskin's phone call, that prompted you to
24 reevaluate the facts in this case; correct?

25 **A. Correct.**

1 Q. That caused you to reconsider your
2 conclusion?
3 A. **That's true.**
4 Q. When you originally got Dr. Paul's report
5 and that phone call from Detective Diskin --
6 A. **Yes.**
7 Q. -- you actually believed he was wrong;
8 correct?
9 A. **I do believe he's wrong.**
10 Q. You do believe?
11 A. **Yes.**
12 Q. Okay. Let me ask you this question: Did
13 you tell me on April 19, 2011, that you initially
14 thought that Dr. Paul was wrong?
15 A. **I did.**
16 Q. Did you tell me on April 19, 2011, that
17 you upon reflecting it believed that you were,
18 quote, unquote, overly dismissive of Dr. Paul?
19 A. **Yes.**
20 Q. Did you tell me on April 19, 2011, in
21 this recorded conversation that you now believed
22 that Dr. Paul could be right?
23 A. **I did.**
24 Q. And those were your words; correct?
25 A. **It's consistent with something I would**

1 **say. I believe you're correct. Those are my**
2 **words.**
3 Q. And if there is any dispute, we have the
4 audio. I don't want to put words in your mouth.
5 On that day, April 19, just a few weeks ago, you
6 told me you initially thought Dr. Paul was wrong;
7 correct?
8 A. **Yes.**
9 Q. But that now, having a chance to review
10 or rereview the medical records of Ms. Neuman, you
11 believe you were overly dismissive; correct?
12 A. **That's correct.**
13 Q. And that you now, today -- or let me stay
14 with the 19th. On April 19th believed that
15 Dr. Paul could be right?
16 A. **On April 19 it was my belief that**
17 **Dr. Paul was correct or could be right.**
18 Q. Before you reached that opinion on
19 April 19, you told the prosecutors in an email to
20 them on March 3rd, 2011, that you believed the
21 organophosphate argument can be dismantled on the
22 basis of the clinical data collected on the
23 participants of the sweat lodge ceremony; that is
24 to say, you believe their findings are inconsistent
25 with organophosphate toxicity; correct?

1 A. **Yes.**
2 Q. And on April 19, when you told me in this
3 recorded conversation that Dr. Paul could be right
4 about his conclusions, you also told me that you
5 take back that statement in its entirety; correct?
6 A. **Not -- maybe not in its entirety. But I**
7 **think the part about it could be dismantled on the**
8 **basis of clinical findings because -- well, having**
9 **not reviewed the medical records of every**
10 **participant, those that I have reviewed, not all of**
11 **them, most of them, do not show evidence of**
12 **organophosphate toxicity.**
13 Q. I'm talking about Liz Neuman. You on the
14 date of April 18 and 19, Doctor, did indicate to me
15 that you started reviewing her records again on
16 March 31st; correct?
17 A. **Yes.**
18 Q. After this trial had already started?
19 A. **Yes.**
20 Q. And based upon you taking another look at
21 the medical records and Dr. Paul's report and his
22 conclusions, you believed that he could be right.
23 That's what you told me on the 19; correct?
24 A. **That's correct.**
25 Q. And the statement you made to the

1 prosecutors on March 3, that you thought the
2 argument could be dismantled, you told me on the
3 19th that you took back that statement; correct?
4 If you don't recall, that's okay.
5 A. **That's okay. I prefer to quote myself if**
6 **that's available.**
7 Q. Sure. I'm going to have you review
8 what's been marked for identification as
9 Exhibit 997, Doctor, starting at page 14, line 26,
10 going to page 15, line 6. Okay?
11 Let me know whenever you're done
12 reviewing it.
13 A. **Okay. I'm looking at that for that**
14 **sentence about dismantling.**
15 Q. If you look at page 14 down at line 26.
16 Dr. Mosley, do you recall me asking, you then wrote
17 in this email, quote, end quote, I do believe the
18 organophosphate argument can be dismantled on the
19 basis of the clinical data collected on the
20 participants of the sweat lodge ceremony. That is
21 to say, I believe there are findings that are
22 inconsistent with organophosphate toxicity.
23 And this is what you wrote on March 3rd;
24 correct?
25 And your answer was?

1 A. Yes.

2 Q. I then asked you, now, however, after
3 reviewing the additional medical records of Liz
4 Neuman, you would take back that statement;
5 correct?

6 And your answer was?

7 A. Yes.

8 Q. And I asked you, and so you do not
9 believe that there are inconsistent findings with
10 organophosphate toxicity from your review of Liz
11 Neuman's medical records?

12 And your answer was?

13 A. Based on Liz Neuman's -- just based on
14 what I've read in Liz Neuman's records alone and
15 what I've heard about it from the other discussion
16 I had yesterday about several other people having
17 miosis and frothy sputum, those were findings I did
18 not expect to find when I wrote that letter.

19 Q. And then I asked you, okay. So the
20 bottom line is -- you know -- and I appreciate --
21 you know -- you wrote this statement with the
22 information you had in mind on March 3.

23 So now having had the chance to review
24 the additional information, you would retract this
25 whole statement; is that correct?

1 And your answer was?

2 A. Yes.

3 Q. So I think we're going to recess for the
4 day.

5 But on April 19, only a few weeks ago,
6 Dr. Mosley, you did tell me based on your
7 reevaluation of the records, Dr. Paul could be
8 right about his conclusion regarding not heat
9 stroke, organophosphate toxicity; correct?

10 A. Yes.

11 MS. DO: Your Honor, do we need to recess?

12 THE COURT: Thank you, Ms. Do.

13 Ladies and gentlemen, we will take the
14 recess. Please remember the admonition. Please
15 reassemble at 9:15 tomorrow.

16 Dr. Mosley, you're excused at this time.
17 The rule of exclusion has been invoked. You can't
18 discuss your testimony with any other witness until
19 the trial is completely over.

20 Thank you.

21 (The proceedings concluded.)

22
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24
25

1 STATE OF ARIZONA)
2 COUNTY OF YAVAPAI) ss REPORTER'S CERTIFICATE

3
4 I, Mina G. Hunt, do hereby certify that I
5 am a Certified Reporter within the State of Arizona
6 and Certified Shorthand Reporter in California.

7 I further certify that these proceedings
8 were taken in shorthand by me at the time and place
9 herein set forth, and were thereafter reduced to
10 typewritten form, and that the foregoing
11 constitutes a true and correct transcript

12 I further certify that I am not related
13 to, employed by, nor of counsel for any of the
14 parties or attorneys herein, nor otherwise
15 interested in the result of the within action.

16 In witness whereof, I have affixed my
17 signature this 18th day of May, 2011.

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MINA G. HUNT, AZ CR No. 50619
CA CSR No 8335

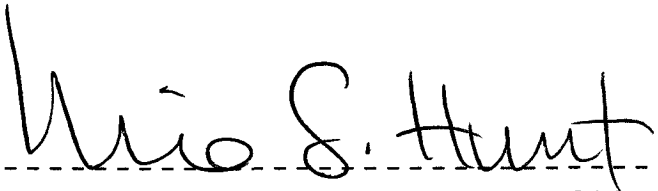
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2 COUNTY OF YAVAPAI) ss: REPORTER'S CERTIFICATE
3

4 I, Mina G. Hunt, do hereby certify that I
5 am a Certified Reporter within the State of Arizona
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16 In witness whereof, I have affixed my
17 signature this 18th day of May, 2011.
18
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22 
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